THE AMERICAN WEST

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View of Mount Rainier, Washington, from Spray Park.
(Photo by Ed Cooper)

THE

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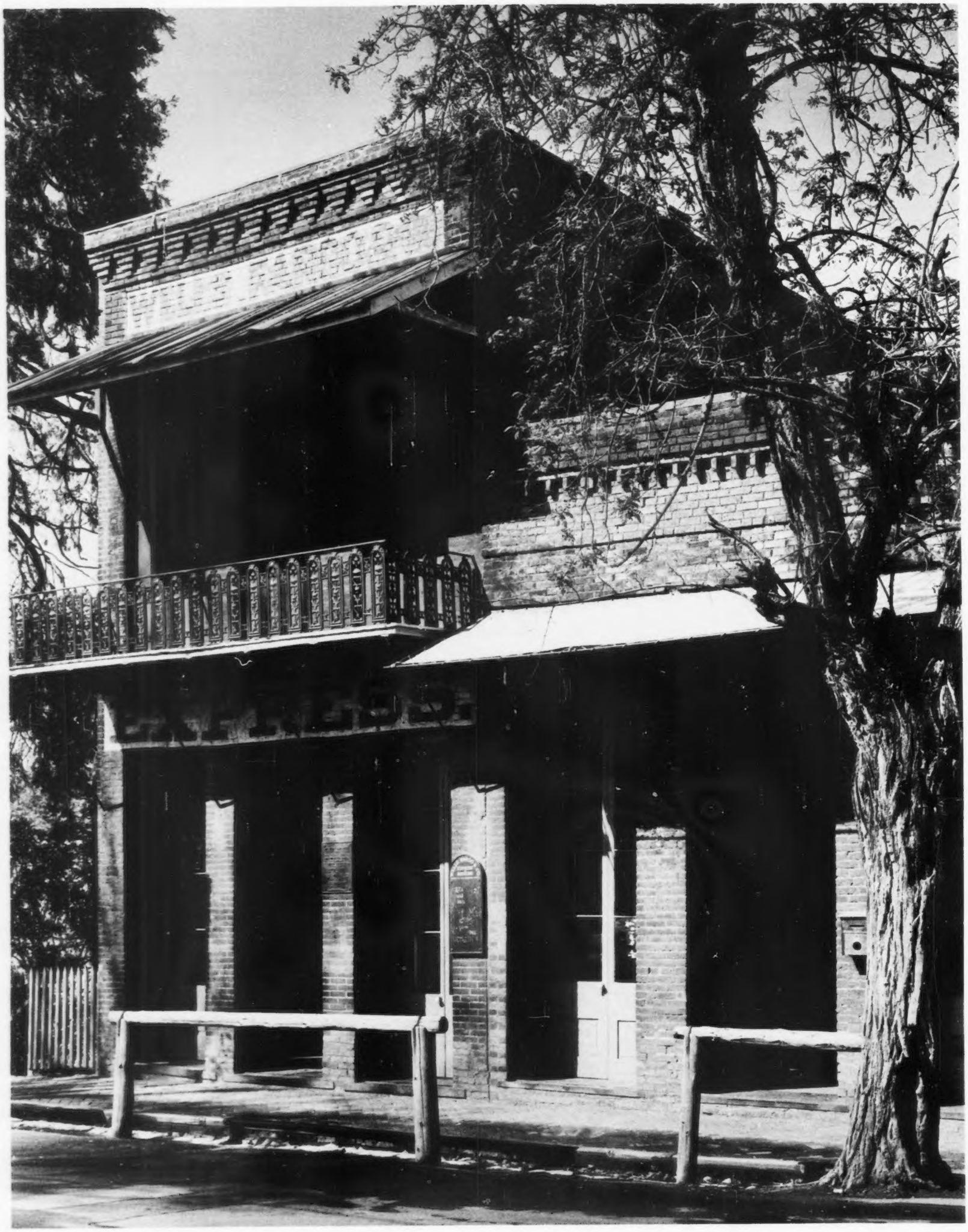

DANIEL D. SULLIVAN

Erected in 1858, the Wells, Fargo Bank of Columbia, California, was completely restored in 1954, a fitting landmark to the rich days of the Mother Lode.

THE
AMERICAN WEST

THE MAGAZINE OF WESTERN HISTORY

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March 1971/ Volume VIII, Number 2

Sponsored by the Western History Association

PUBLISHED SIX TIMES PER YEAR — JANUARY/ MARCH/ MAY/ JULY/ SEPTEMBER/ NOVEMBER

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THE AMERICAN WEST is published in January, March, May, July, September, November, by American West Publishing Company, 599 College Avenue, Palo Alto, California 94306. Single copies: $2.00. Subscriptions: $9.00; two years $16.00; three years $23.00 *(outside U.S. $1.00 per year extra)*. Manuscripts and communications from subscribers should be sent to the above address; members of the Western History Association should address all communications to Everett L. Cooley, P.O. Box 8005, Salt Lake City, Utah 84108.
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NIKOLA TESLA'S

By HARRY L. GOLDMAN

ON THE AFTERNOON of May 17, 1899, inventor Nikola Tesla stepped from the train at Colorado Springs obsessed with electrifying the earth. The elite of Little London turned out to welcome the stranger from New York City and they were not disappointed—Tesla was a striking figure. His tall slenderness, wavy black hair, piercing gray eyes, and European mannerisms never failed to capture the emotions of those about him.

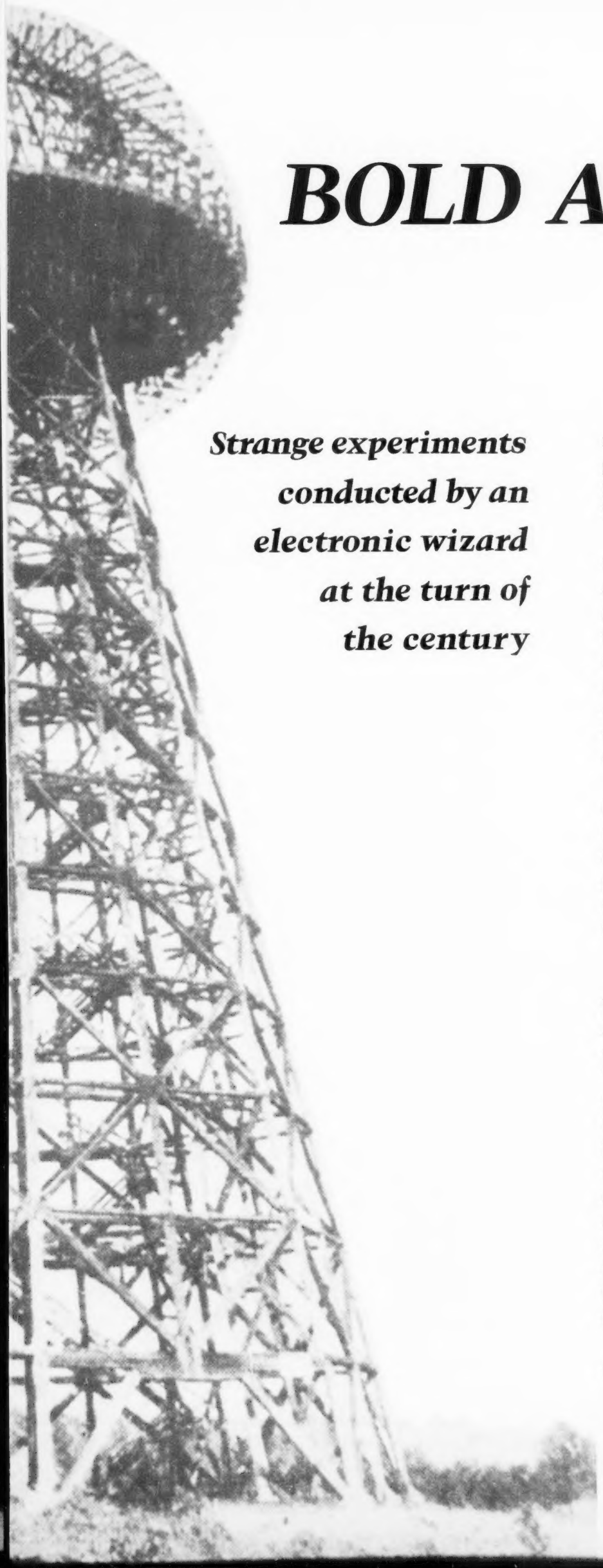
Of the several dignitaries who made it their business to be on hand, few were able to comprehend the significance of Tesla's visit. It was not long before the electrical wizard was able to give his audience a traumatic demonstration of his purpose.

Of the thousands who reached these shores in 1884, destiny marked Nikola Tesla, an immigrant from Yugoslavia, as one who would soon stand out from the crowd. Within a span of fifteen years, the ambitious inventor bestowed upon his adopted country a prodigious number of scientific achievements and accomplishments.

He not only gave us our present system of alternating-current power transmission, but also the invaluable a.c. motor, ideas and apparatus for industrial induction heating and welding, diathermy, with its medical applications, synchronous time mechanisms, gaseous tube lighting as in neon and fluorescent bulbs, as well as X-ray apparatus and techniques for their employment. Furthermore, Tesla established a considerable amount of the groundwork for radio communications and related fields including the science of radio-guided missiles.

At the turn of the century, when colleagues were directing their attention to moderate distance code communications, Tesla was feverishly anticipating a method of broadcasting music, speech, pictures, and newspapers to all parts of the globe. According to the inventor, his "World System" of communications would not only interconnect telegraph, telephone, and stock ticker services, but would also provide the benefits of safe and accurate navigation without the aid of compasses. Clocks throughout the world would require little attention as their operation could be radio-controlled from a

Tesla's 187-foot tower in Shoreham, Long Island, was capped by a dome 68 feet in diameter. The structure was part of his proposed world wireless system of broadcasting.



BOLD ADVENTURE

Strange experiments conducted by an electronic wizard at the turn of the century

master station. In addition, he claimed that it would provide personal telephone communications between parties, regardless of distance, with an incredible device small enough to be carried in one's pocket.

As though this were not enough, Tesla's World System was to incorporate the transmission of electric power without the aid of wires. Swaggering in his own inimitable manner of grandeur, the inventor predicted the feasibility of running the street cars of London and lighting the lamps of Paris by the power generated from Niagara. The implications of such a reality fermented a passion which bordered on the threshold of physical pain. "Humanity will be like an ant heap stirred up with a stick," cried the impetuous Tesla. "See the excitement coming!"

Tesla's New York experiments had become restricted by the physical limitations of his Houston Street laboratory. The four-million volt lightning-like discharges produced by his electrical transformers struck ceilings and walls. It was impossible for him to apply practical tests to his wireless transmission theory without accommodations more in proportion to the enormity of his imagination.

EVIDENTLY, Tesla's fame and stories of his scientific achievements had preceded him in his journey to the West. His arrival created quite a stir in that bustling community known "for its cosmopolite and high bred people" as well as "its reputation of always doing the right thing at the right time." Noting Tesla's arrival, the Colorado Springs *Gazette* (May 28) declared, "This week has been noticeable for the presence of distinguished personages in Colorado Springs. Tesla, the electrician, second only to Edison, if indeed to anyone, is establishing his scientific headquarters here and will settle the question of wireless telegraphy in the weeks to come." News reporters badgered the inventor with questions about his scientific achievements and for information pertinent to his presence in Colorado Springs.

Tesla satisfied their curiosity by informing them that he proposed "to send a message from Pike's Peak to Paris."

XUM

(This was more than two years prior to Marconi's famed transatlantic transmission.) The natives were well aware of a United States Signal Service (Weather Bureau) telegraph station at the summit of their famous mountain but Tesla's utterances were something else. The inventor further explained, "I will investigate electrical disturbances in the earth. There are great laws, which I want to discover, and principles to command."

Tesla took a room at the Alta Vista Hotel with a view of the majestic Peak, affording him an opportunity for enjoying his favorite pastime, watching nature's lofty thunderbolts. Furthermore, he liked Room 207 because its number was divisible by three. Tesla's habit of carrying out experiments and repeated acts in numbers divisible by three was but one of the many phobias that haunted the inventor throughout his life.

Armed with a loan of $30,000 from John Jacob Astor, $10,000 from M. Crawford, a drygoods merchant, and the unending influence of his lawyer friend, Leonard E. Curtis, Tesla became fervently committed to a regimented schedule. He contracted for the construction of an experimental laboratory of his own design. In mid-July, a structure of awe and mystery stood isolated on the prairie pasture east of the Colorado School for the Deaf and Blind. It was a huge barn-like construction approximately 100 feet square and braced on three sides. Above its sloping roof was an 80-foot tower through which there extended a 200-foot mast topped by a one-meter copper sphere. The forbidding omen hovering over the area was augmented by a fence with notices written in large black letters warning, "KEEP OUT—GREAT DANGER!"

The major part of the interior was taken up with a variety of Tesla innovations. The electrical wizard was pioneering virgin fields and his apparatus, yet untried and exhibiting all the characteristics peculiar to an H. G. Wells's fantasy, had to be constructed by highly trained technicians and shipped from the east. High-voltage transformers, dynamos, resonant-tuning devices, capacitor-discharge apparatus, oil-insulated capacitors (a Tesla invention), and a large metered control panel were among the items neatly spaced about the hall.

At one end of the laboratory was the secondary coil of a giant Tesla transformer, which the inventor termed a "magnifying transmitter." Its primary coil (buried underneath the floor) was fifty-one feet in diameter and wound with heavy copper bars.

In the center of the secondary was another coil with a diameter of ten feet. It carried 100 turns of wire and served to function as an extension of the secondary. The 200-foot mast extended up through the center and supported a large copper cable, which connected to the one-meter copper sphere. Using these devices, Tesla intended to determine if the earth possessed an electrical charge (it does) and to institute experiments that would alter its magnitude (he did). Who but Tesla would be so bold as to undertake a scientific investigation of such proportions?

The mystified citizens of Colorado Springs kept a safe distance from the odd-looking structure. Passersby, such as those using the trolley line on Nob Hill, were amazed by its precocious appearance and would stare in unison with similar

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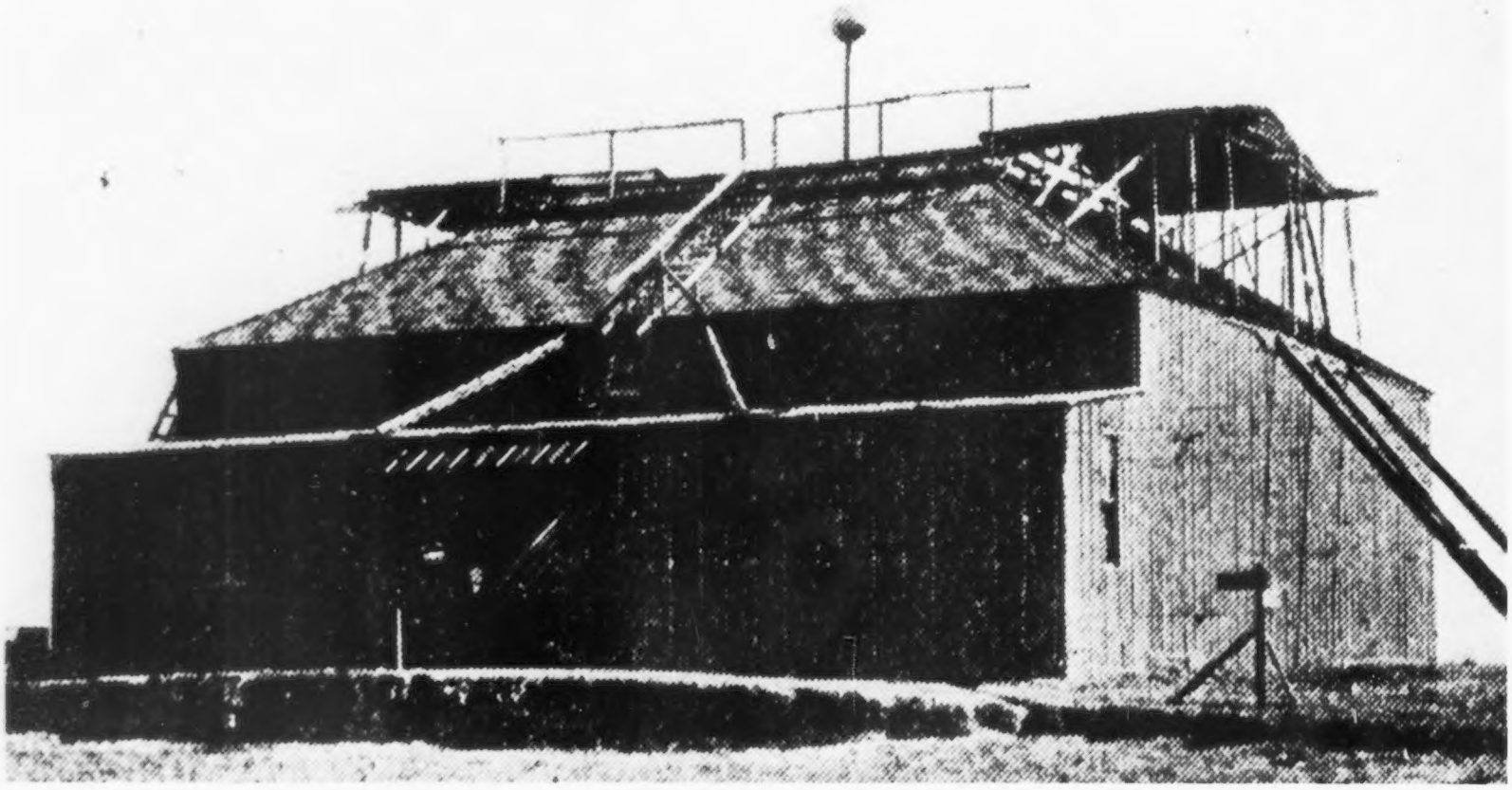


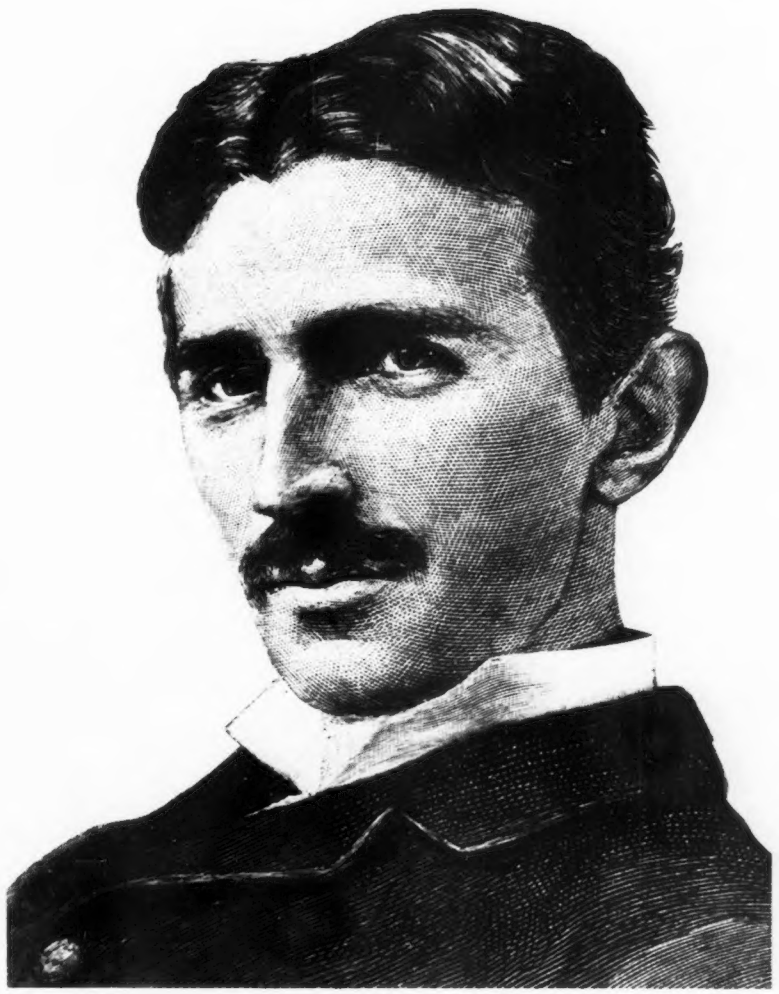
The Tesla Experimental Station, Colorado Springs, in the 1890s. Later the 100-square-foot building supported a tower 80 feet high with a mast 200 feet above that and topped by a copper sphere.

sorts of ungainly expressions. Herdsmen moving their animals out to pasture went about their work unable to conceal their contemplations.

Those whose curiosity led them to trespass the bounds of the property reported seeing strange blue flickering lights emanating from the enigmatic gadgets within the laboratory. Said one eyewitness, "Through this mass of intricate and dangerous mechanism, Mr. Tesla walks as fearlessly as if on the streets of the city." A reporter who had managed a peek through the windows was startled to find a Tesla employee standing at his side. "Your life is in peril," he said, "and you would be a great deal safer if you would remove yourself from the vicinity." Tesla was extremely secretive about his work and always maintained a strict security. In order to discourage the overly curious, he publicly announced, "I have an instrument at my station which is capable of killing thirty thousand people in an instant."

There were, however, a few residents who were allowed the privilege of infringing upon the sanctity of Tesla's Olympus. In the book, *The Life of Nikola Tesla,* authors Hunt and Draper mention Fred Stevens, a photographer, and Richard Gregg, an errand boy.

Nonetheless, it is doubtful whether anyone on either side of the Mississippi ever viewed a creation similar to the likes of Tesla's experimental station, and it is no wonder that the sight prompted one writer to say, "Mr. Tesla is a great scientist but a poor architect."



Nikola Tesla, 1856–1943.

BY MID-SUMMER of 1899, Tesla was able to utilize his Colorado experimental station for preliminary investigations of his wireless telegraphy theories. He was extremely pleased with this western state as the site for his experiments. Aside from the pleasantness of its natural beauty, the rarefied air provided exceptional opportunities for the study of high potential electrical phenomena. "No better opportunities for such observations as I intended to make could be found anywhere," said Tesla. "Colorado is a country famous for the natural displays of electric force. In that dry and rarefied atmosphere the sun's rays heat the objects with fierce intensity. I raised steam, to a dangerous pressure, in barrels filled with concentrated salt solution, and the tin-foil coatings of some of my elevated terminals shriveled up in the fiery blaze.

"An experimental high-tension transformer, carelessly exposed to the rays of the setting sun, had most of its insulating compound melted out and was rendered useless. Aided by the dryness and rarefaction of the air, the water evaporates as in a boiler, and static electricity is developed in abundance.

"Lightning discharges are, accordingly, very frequent and sometimes of inconceivable violence. On one occasion approximately twelve thousand discharges occurred in two hours, and all in a radius of certainly less than fifty kilometers from the laboratory. Many of them resembled gigantic trees of fire with the trunks up or down. I never saw fire balls, but as a compensation for my disappointment, I succeeded later in determining the mode of their formation and producing them artificially."

On one occasion, a fierce lightning bolt nearly demolished Tesla's station even though the actual strike occurred at a great distance. Reported Tesla, "A heavy cloud had gathered over Pike's Peak range and suddenly lightning struck at a point just ten miles away. I timed the flash instantly and, upon making a quick computation, told my assistants that the tidal wave would arrive in 48.5 seconds.

"Exactly with the lapse of this time interval a terrific blow struck the building, which might have been thrown off the foundation had it not been strongly braced. All the windows on one side and a door were demolished and much damage done in the interior. Taking into account the energy of the electric discharge and its duration, as well as that of an explosion, I estimated that the concussion was about the equivalent to that which might have been produced at that distance by the ignition of twelve tons of dynamite."

It was during a violent Colorado electrical storm that Tesla

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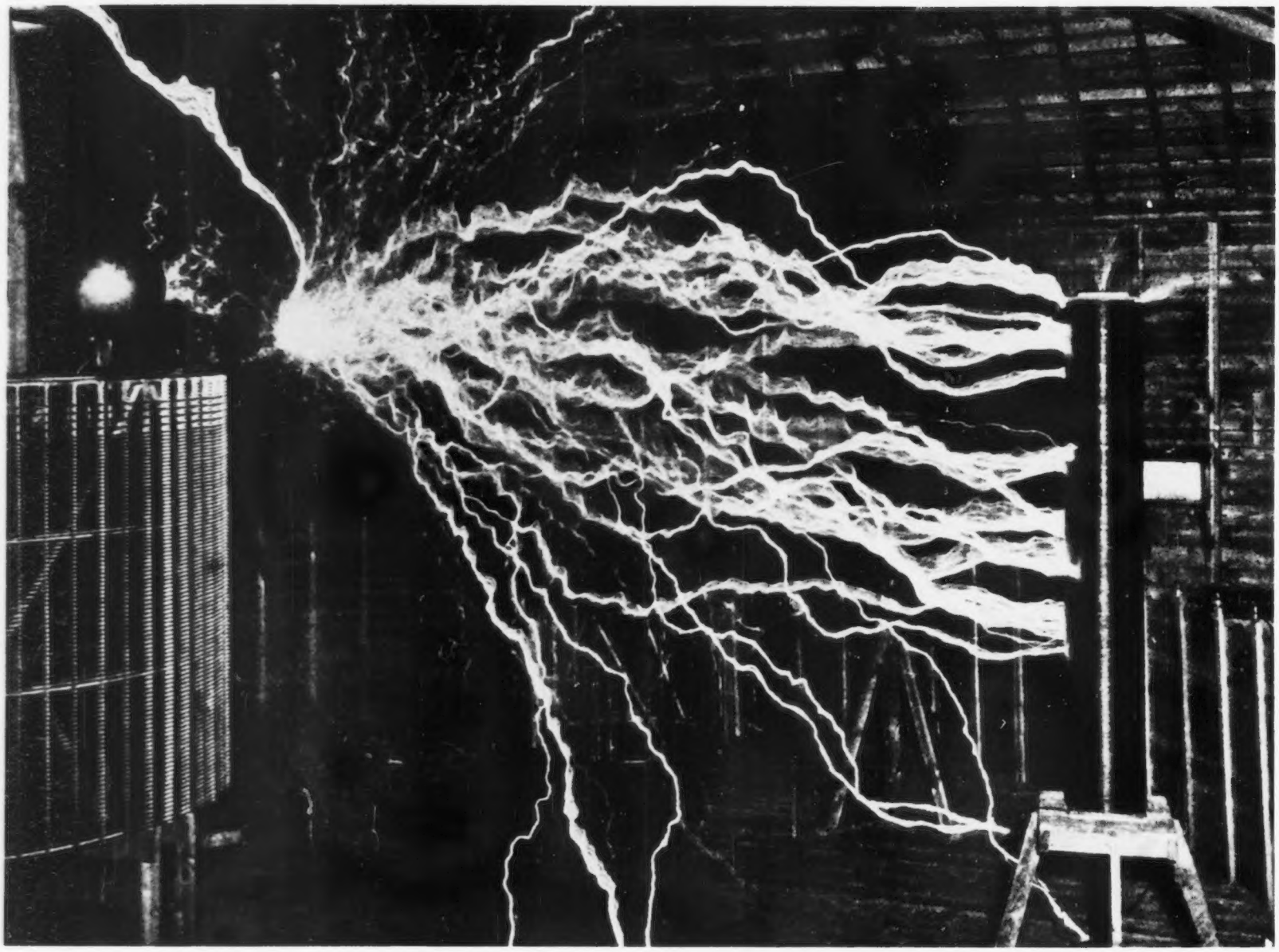


A lightning arc—representing 12 million volts—jumped 22 feet to the tuned helix at the right in this 1899 photo of the interior of Tesla's experimental station in Colorado Springs. The large fence-like structure in the background formed the secondary coil of the magnifying transmitter, a high-voltage transformer. The primary coil, 51 feet in diameter, lay beneath the floor. The coil at the left served as part of the secondary coil.

came to make one of his most astounding scientific discoveries. After carefully adjusting his delicate measuring instruments, the inventor noted an unusual reaction to the earth's electrical activity. "No doubt whatever remained," said Tesla, "I was observing stationary (standing) waves. . . . Impossible as it seemed, this planet, despite its vast extent, behaved like a conductor of limited dimensions. The tremendous significance of this fact in the transmission of energy by my system had already become quite clear to me. Not only was it practicable to send telegraphic messages to any distance without wires, as I recognized long ago, but also to impress upon the entire globe the faint modulations of the human voice, far more still, to transmit power, in unlimited amounts to any terrestrial distance and almost without loss."

Tesla later suggested the employment of standing waves as a means of detecting moving objects at great distances. "By their use . . . we may determine the relative position or course of a moving object, such as a vessel at sea, the distance traversed by the same, or its speed." It wasn't until just before World War II, some forty-one years later, that radar—as foretold by Tesla—became a reality.

AS A RESULT of his investigations, Tesla concluded that the earth was not only electrified, but that it was charged to an extreme potential. Accordingly, if it were possible to increase the magnitude of the earth's electric charge by artificial means, it might also be possible to withdraw the applied energy anywhere on the globe. Basically, this meant that Tesla's "system" was to provide the benefits of electricity not

only to the highly populated continents, but even to the most remote civilized outposts whether on land or at sea.

To accomplish this, however, would require the development of transmitting and receiving apparatus unlike any devices heretofore conceived. It was to this purpose that the electrical wizard dedicated his tireless efforts. At the end of the summer of 1899, the equipment stood ready, in statue-like silence, awaiting the highest man-made voltage experiment in history. Tesla was about to cross a new frontier—one far beyond that which anyone else had reached.

During the initial test, the mute electrical machinery suddenly transformed into lifelike fire-spitting demons. Power transformers supplying the heavy currents hummed a dissonant sixty-cycle tune. The floor beams vibrated a cacophonic reply. Spheres of the capacitor-discharge circuit became bridged by a machine-gun series of wrist-thick blinding flashes. The huge secondary of Tesla's transformer was crowned by an electrical fire of long finger-like streamers. A halo of harassing brush discharges enveloped the entire surface of the main switch panel.

Evidently, stray high-frequency currents had found a return path into the Colorado Springs Electric Company's facilities. Unknown to Tesla, the reaction was playing havoc with their generators and transmission lines. Lightning insulators within a dozen miles became short-circuited and glowed with purplish arcs.

The awesome discharges, thundering roar, and the production of choking quantities of pungent ozone portrayed an impression of impending doom. Waving his arms wildly, Tesla screamed an abrupt order to assistants to halt the experiment. Pandemonium gave way to a frightening silence.

Following an inspection of the apparatus and the making of critical adjustments, the inventor issued instructions for a continuation of the test. This time, however, he would take a position outside from where he could observe the copper sphere high above the roof. Standing alone some three hundred feet from the building, the wizard signaled a resumption of the experiment. He presented a bewildering sight. His inch-thick rubber heels, tight fitting cutaway coat, and black derby hat made him appear to be seven feet tall.

As before, the high-voltage equipment gave an immediate response. Full-fledged lightning bolts over 135 feet in length erupted from the copper sphere. Leaping about in unpredictable fashion, one leader followed the mast downward into the laboratory; another hit the 80-foot framework which was giving support to the 200-foot pole, while others were seen as wriggling streaks clawing at the sky above.

Nearby, in the village of Colorado Springs, the natives could hardly ignore the electrical wizard's scientific mischief. The thundering roar of his man-made lightning bolts could be heard as far away as Cripple Creek. People walking along the streets experienced the unpleasantness of sparks jumping between their feet and the ground. An electrical flame leaped from a tap when anyone reached for a drink of water.

So great was the power being thrown out by Tesla's "magnifying transmitter" that light bulbs within one hundred feet of the station glowed regardless of whether they were connected to any circuit and all the electrical equipment of a nearby fuel company ceased to function.

When Tesla's experiments utilized undamped waves (no streamers emitting from the copper sphere), horses at the livery stable suddenly bolted and kicked free of their stalls. Even the insects felt the effects of the electrical barrage. Butterflies became electrified and helplessly swirled in circles —their wings spouting blue halos of "St. Elmo's Fire." One graphic account of a Tesla experiment tells of an incident which brought about the destruction of the main generator at the Colorado Springs Electric Company powerhouse.

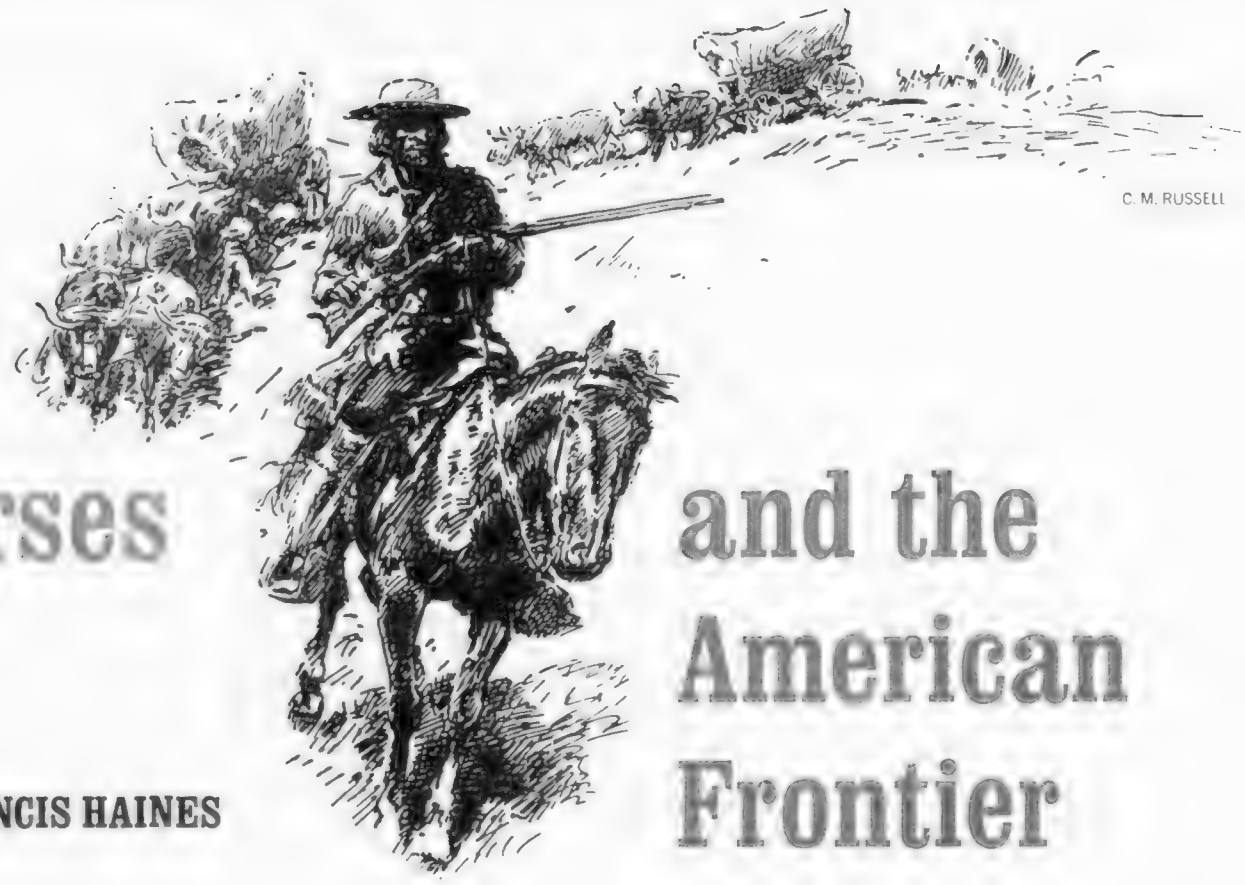
ASIDE FROM what has been mentioned, little is known of the technical achievements of Tesla's Colorado adventure. The inventor claimed to have demonstrated the practical application of his theory in an experiment which lighted two hundred earth-connected incandescent lamps twenty-six miles from the laboratory. Unfortunately, no photographic record of this event has ever been published and there has been no indication as to the location of the receiving station.

Encouraged by the fruits of his labors, Tesla left Colorado on January 13, 1900, and returned to New York with plans for establishing a world radio broadcasting station (this was two decades prior to the advent of world communications). He obtained $150,000 from J. P. Morgan and began construction of a plant at Shoreham, Long Island. It consisted of a brick building to house the transmitting equipment and a massive 187-foot octagonal tower capped by a sixty-eight-foot mental-framed dome weighing nearly sixty tons.

The plant was never put into operation. Construction problems proved more costly than had been anticipated. And when rumors began circulating debasing the project as a fairy tale, Wall Street turned its back on Tesla's enterprise, a stroke that defeated one of the most unbelievable schemes in the history of human advancement.

Tesla's Colorado station came to an equally inglorious end. It remained intact for several years but eventually was torn down and its contents sold as payment in a suit for unpaid bills and employees' wages. Few references to Colorado history mention its existence and the omission makes it appear as though Tesla's bold adventure was nothing more than a passing dream.

Harry L. Goldman, *a teacher of science in the public schools of New York State, has published numerous articles on Nikola Tesla and is former president of the Tesla Society.*



C. M. RUSSELL

Horses and the American Frontier

By FRANCIS HAINES

Most famous in our Western annals and Indian traditions is that of the White Steed of the Prairies; a magnificent milk-white charger, large-eyed, small-headed, bluff-chested, and with the dignity of a thousand monarchs in his lofty, over-scorning carriage. He was the elected Xerxes of vast herds of wild horses, whose pastures in those days were only fenced by the Rocky Mountains and the Alleghenies. At their flaming head he westward trooped it like the chosen star which each evening leads on the hosts of light. The flashing cascade of his mane, the curving comet of his tail, invested him with housings more resplendent than gold- and silver-beaters could have furnished him. A most imperial and archangelical apparition of that unfallen, western world, which to the eyes of the old trappers and hunters revived the glories of . . . primeval times. . . . Whether marching amid his aides and marshals in the van of countless cohorts that endlessly streamed over the plain, like an Ohio; or whether with his subjects browsing all around the horizon, the White Steed gallopingly reviewed them with warm nostrils reddening through his cool milkiness; in whatever aspect he presented himself, always to the bravest Indians he was the object of trembling reverence and awe.

THUS HERMAN MELVILLE, in *Moby Dick*, describes some of the mystical aura surrounding the horses of the West in the middle of the nineteenth century, although he himself had never seen the White Steed, nor had he even talked with men from the western plains who had reported such sightings. He was describing how the White Steed had captured the American imagination of that period.

Josiah Gregg, in his *Commerce of the Prairies*, his journal for 1820–40, supplies the following details that he secured firsthand from hunters on the plains: "The beauty of the mustang is proverbial, one in particular has been celebrated by hunters of which marvelous stories are told. He has been represented as a medium-sized stallion of perfect symmetry, milk white—save a pair of black ears—a natural 'pacer'.

"But I infer this story is somewhat mythical from the difficulty one finds in fixing the abiding place of this equine hero. He is familiarly known by common report, all over the great prairies. The trapper celebrates him in the vicinity of the Rocky Mountains; the hunter on the Arkansas, or in the midst of the plains, while others have him pacing at the rate of half a mile a minute on the borders of Texas. It is hardly surprising that a creature of such ubiquitary existence should never have been caught."

The horse, player of many roles in the building of the West, figured in the life of the mining country, as well as the military and cattle ranching of the frontier.

EDITOR'S NOTE: This article is excerpted from *Horses in America: The Story of American Horses and Their Riders from* Echippus *of Prehistory to the Rodeos of Today*, by Francis Haines, to be published by Thomas Y. Crowell Company, New York, in May 1971. Copyright © Thomas Y. Crowell Company.

THROUGH ALL the turmoil and disruption that the Civil War brought to the eastern United States, the mining frontiers from the eastern foothills of the Rockies on west to the Pacific coast continued their development almost unchecked. The long series of gold rushes began at Sutter's Mill in the central valley of California and moved north in a series of leaps into British Columbia, then south into Idaho and northeastern Oregon and finally into Montana, ending in 1865 at a rich strike appropriately named Last Chance Gulch. Each new camp drew many men from the older ones and brought in a swarm of outsiders, newcomers to the West, many of them evading military service in either the northern or southern army. As each new camp sprang up in the wilds, it had the same basic needs as other communities—food, supplies, and transportation. From the first the miners wanted mail brought in and stages to carry out the gold and passengers ready to leave.

The new mining camps depended on horses in large numbers. The rich placer deposits were never on navigable streams, and the rich lodes of ore were always found on the ridges and steep slopes in rough country where erosion had removed the loose overburden to expose the minerals. Extending railroads into new mining districts was always a slow process, especially when the finds were made several hundred miles out in the unsettled country. People, mail, and freight came in on horses or mules, or in vehicles drawn by horses, mules, or oxen from the nearest rail station or boat landing as far as five hundred miles away. An important factor in the rapid development of each new camp was the presence of a large supply of Indian horses in the vicinity. This was especially evident in the strikes in the Columbia Basin and western Montana.

As soon as rich diggings opened up, stage lines were established with stations all along the way, with about fifteen horses and two or three men at each station. In 1863 a new stage line went north from Salt Lake City on the Overland Stage route. At Fort Hall it branched, the left-hand fork going west to the Boise Basin diggings, then along the old Oregon Trail to Walla Walla. The right-hand fork went on north to Virginia City and later was extended to Helena and Fort Benton. Several short feeder lines branched from both of these major lines.

To keep the whole network of stage lines in the West operating at a profit, they were organized into divisions, each under a tough superintendent who had great responsibility and power. Joseph A. Slade, the terror of the Overland, was among the toughest. To check on the superintendents, the company hired inspectors known as road agents to travel the stage routes riding in the coaches or requisitioning saddle horses at the stations. They often posed as ordinary travelers, but they carried credentials to support their demands and recommendations.

The road agent's practice of selecting the pick of the saddle horses from the station herd was also the practice of the tightly knit gang of robbers organized by Henry Plummer to steal horses and gold and hold up stages. Members of the

The trail boss keeps an eye on his charges.

C. M. RUSSELL

In the long struggle of native Americans against the white man, the Indian scout traveled light, and could keep well out of sight of the cavalry.

gang were sometimes known as the "Innocents," from their coded call for help in a tight spot, "I am innocent." Plummer had several of the stage line employees either as gang members or bribed to help his men by furnishing fresh horses on demand. This practice soon led to the gang's being called a bunch of road agents, a name that soon spread to include all holdup men in the West, and the original meaning was forgotten. Plummer's gang terrorized the whole region from Fort Benton to Salt Lake City until one summer a fever tick bit a miner and set off a chain of events that ended in the hanging of Plummer and several of his gang in Bannock and Virginia City in the winter of 1863–64.

IN THE SETTLING of the West, the horse was an indispensable part of the military. Officers liked each soldier on active duty to carry along enough items to be ready for a variety of contingencies—a worthy concept in theory, but one which in practice burdened the individual with many pounds of equipment that seldom was needed. With such a load of extras, the cavalryman needed a large, strong horse to carry him and all his gear on the march. Then he set out to chase the elusive red man—his horse carrying saddle, bridle, weapons, ammunition, mess kit, canteen, overcoat, blanket, bed sheet, halter, hobbles, picket rope, rations, and a feed bag with perhaps a few pounds of oats. A cavalry unit with each horse so encumbered did well to cover twenty miles a day over an extended period, no faster than a well-conditioned infantry unit moved. If a field piece was taken along, and an ambulance or two plus wagons for the cooking gear, extra food, and grain, the whole column was further slowed and its field of operations restricted to the smoother ground. A cavalry column could travel forty or fifty miles a day on a forced march by leaving much of the gear behind.

In contrast a war party of Indians traveled light. Each man had his lightweight horse gear—usually a bridle and a pad saddle, weapons, a small robe, and a parcel of dried meat—the whole load weighing not more than the trooper's saddle. The Indian's horse was smaller and tougher, and it subsisted well on natural forage. Such a war party could loaf along, kill a buffalo now and then, pasture the horses a few times each day, and still keep well ahead of the cavalry.

Even when the Indians moved with their families and all their gear, they just loaded up the pack string and took off cross-country at a good pace, going where no wagons could follow, and covering twenty, thirty, forty, or even fifty miles a day until the emergency had passed. If one of the horses they were using started to lag, they had plenty of horses in the loose herd to change to.

The great stamina of the western range horses as shown in the Nez Percé War raised some question about the desirability of crossing range horses with draft stallions to produce large mounts for the cavalry and teams for the field artillery. Perhaps the western horses could do cavalry work without needing to be any larger. In 1897 the Bureau of Animal Husbandry conducted a road test with horses taken directly from a range band and used with no special conditioning.

Two young Wyoming cowboys, Bill and Bert Gabriel, were hired for the ride. They caught two unbroken horses and gentled them, but did not shoe them or give them any feed except pasture grass. They left Sheridan, Wyoming, on June 5, 1897, and rode by easy stages of about twenty-six miles a day, allowing their horses to graze by the roadside for their entire subsistence. On the ninety-third day, September 6, they reached Galena, Illinois, with their horses in as good condition as when they had left Sheridan. This impressive record helped sell thousands of range horses to the British army for use in the Boer War, and a large number for polo ponies, but it did not impress the army officers, who still preferred the larger, less durable horses for their cavalry.

About the time the Gabriel brothers reached Illinois, three other Wyoming cowboys from just across the Big Horn Range to the west of Sheridan were riding north with a band of horses, hopeful of reaching the new Yukon gold camps. They planned to follow the trail opened by the Northwest Mounted Police across the foothills and mountains from Edmonton. Transportation in the Yukon was a serious problem, and the few horses at Skagway Beach sold for three or four hundred dollars each. To tap this rich market the men started with seventy-five five- and six-year-olds carefully chosen from a large herd. They believed that horses raised in Wyoming could live and work in the Yukon.

With a chuck wagon to carry their camping gear and food, and a few friends to help haze the band along for the first few days, they started north late in the summer of 1897, crossing into Canada at Sweet Grass and paying duty of two dollars a head. They planned to wait until the rivers froze and cross on the ice, but chinook winds spoiled this plan so they shipped the horses to Edmonton, where they spent two months breaking them for use as pack animals, and then with a bobsled went on to Peace River in February, after selling off about twenty of the more stubborn animals.

On this winter trip the range horses proved that when handled by experienced men they could manage through the winter on grass, except for a little grain fed to the team pulling the sled. At Peace River the men left the sled and put all their supplies on pack animals. At Dease Lake they worked most of the summer packing supplies from the head of navigation on the Stikine River to posts in the backcountry. After the trip of two thousand miles and two months of heavy packing, the horses were still in good condition.

During the winter of 1898–99 most of these horses were lost. They were turned out to pasture in the open glades, and the local Indians killed them for food. In the spring, with only eight horses and seven mules left, the men pressed on across the range to the Pelly River, a tributary of the Yukon. There they built a large raft, loaded their entire outfit, and started downstream, only to have their ungainly craft capsize in the rapids. The men escaped the wreck with one horse and two mules. In this wild northern country the horses had proved that they could live well on forage, even though they could not evade the weapons of the Indians or the white water of the rivers.

During the hard times throughout the country in the 1890s, the cattle and horse business suffered. Saddle horses were hard to sell at any price, and the ranges filled up with unbroken, often unbranded, animals. The Boer War relieved the situation. The British government had men in ten western states buying horses by the thousands to ship to South Africa. Large buying stations were opened at Miles City, Cheyenne, Sheridan, and Denver, and word went out that sound animals five to nine years old were worth forty dollars a head, cash. Horses were shipped to the stations from all over the West, and the resulting cash sales brought instant prosperity to the ranch country. Since many of these horses had never been ridden and buyers wanted only broken horses, cowboys gathered around the corrals ready to gentle any mount for three to five dollars. Even so, some of the horses crowhopped a little when they were galloped up to the waiting inspector, who usually took them anyway. One observed that he didn't mind a horse that galloped a little high. Any real bucker was turned back. This good market lasted through the summers of 1900 and 1901. By that time the range bands had been reduced and the country was recovering from the hard times, which meant that many horses could again be sold to the eastern markets.

FREDERIC REMINGTON

The cavalry was much more encumbered with gear than was the mounted Indian. The soldier's saddle alone often weighed as much as the Indian's entire load.

THE BASIC PATTERN for the range cattle industry in the American West was developed on the Mexican Plateau, and it moved north with the moving herds to the limits of the open grasslands. This pattern of cattle management was so sound that it was adopted with little change by the westward-moving Americans. As the stockmen moved north they followed two lines of travel—one across the Rio Grande into Texas and on north through the length of the Great Plains into Canada, the other across the Colorado at Yuma into California, then north and east into the Columbia Basin. High mountain ranges interspersed with plateaus covered with desert scrub separated these two routes, and the northward-moving herds did not mingle again until they reached southeastern Idaho and Montana. Along the way, both in southern Texas and in the central valley and coast ranges of California, the local people developed some variations in saddles and how to use them in roping stock. These differences were soon apparent to even the casual visitor, but they had little effect on the efficiency of the working cowboy.

The Californian liked a saddle with a high fork and horn, and a single wide cinch called a center rig. In his roping he used a reata of braided rawhide sixty to a hundred feet long and three-eighths of an inch in diameter. In action he carried the coils in his left hand. He swung a wide loop and could rope an animal forty or fifty feet away. Once the loop settled on its mark, the roper took his dally, one or two turns of the reata around the saddle horn, and the horse braced to tighten the rope and throw the catch. When roping calves for branding,

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one Californian caught a calf by the neck while another threw a loop on the two hind feet, and the calf was stretched out near the branding fire without either rider needing to dismount. When the man with the iron finished, his helper cast off.

The Texan used a saddle with a low horn and two cinches, a double rig. His rope was shorter, usually a "grass" rope about forty feet long, tied firmly to the saddle horn. He rode close to the animal and swung a small loop. When the calf went down the Texan jumped off his horse and held his catch on the ground with his hands on its muzzle and his knee on its neck. As soon as the brand was done, he cast off the rope and remounted. Two Texans working in this fashion could catch more calves than two Californians could. They also worked much harder and got dirtier.

Cowboys from the two sections still argue over the merits of each type of saddle and rope. For speed roping in the rodeo arenas, the short rope with the hard-and-fast tie is superior, but in the open the reata man can make fancy catches the short-rope man cannot even attempt. When these two schools of roping and making saddles met in Montana the result was some crossing: a saddle was produced that has a single cinch, but it is farther forward than the California cinch. This is the three-quarter rig. This saddle has a high horn. Some of the northern cowboys used the wide loop and the dally, while others, usually around Miles City, often used the double rig, the short rope, and the hard-and-fast tie.

On a cattle ranch the spring work began when the ranch horses from the winter pasture were brought in, a few hundred head. They were corraled, examined, and sorted out. The brood mares, stallions, yearlings, two-year-old fillies, and all the three-year-olds were turned out again. The two-year-old stallions were gelded and turned out; the four-year-old geldings were put into a smaller corral and turned over to the buster, who rode each of them three times before they were assigned to the riders, two or three to each man.

The older geldings were the saddle stock from the previous year. Each cowboy who had worked on the ranch the last season was given all the horses left from his last year's string, while a new man was assigned all his horses by the boss. Under this system each man had his good horses in addition to the two or three green-broke broncs, although in some outfits most of the used horses were sold each fall and each rider might have four or five broncs to work with all summer.

Any of these showing real cow sense were kept, and the rest went to the eastern market as gentle saddle horses. Cowboys did not like to work for an outfit that practiced this system.

The cowboy always rested his cutting horse, roping horse, and night horse as much as possible. If he went to see a girl he usually had a very gentle "girlin" horse that would walk peacefully alongside the girl's mount so the two riders could hold hands, but if the cowboy was just going to town or on an errand he rode one of his broncs to give it more training. Thus in town he usually referred to his mount as his bronc, until townspeople and easterners began calling any western horse a bronc, using the word equivalent to cayuse, but to the range man any unbroken horse from Percheron to Shetland pony was a bronc until gentled.

FOR MANY YEARS the Sioux had blocked any intrusion by the stockmen into northeastern Wyoming, the Powder River country, and central Montana, the Judith Basin country, both ideal ranges for stock. Once this tribe had been confined to reservations in the 1870s a vast new area was ready for cattle. The buffalo were slaughtered rapidly and cattle from both western Montana and southern Wyoming moved

in, soon followed by trail herds from Texas, then by trainloads of breeding stock and feeders from the Midwest that met trainloads of beef cattle on their way east to the markets. Investors began buying ranches for the potentially great profits. They were followed by cattle companies formed in Europe, particularly in Scotland and England, that brought in much foreign capital and with it the disadvantages of absentee ownership.

In this new rush the ranges were soon filled to capacity, and a struggle began over water rights and the control of pasture on public land. Cattlemen were faced not only with heavy competition from fellow cattlemen but with a new menace, the sheepmen, who moved in with large flocks. Soon came another troublesome group, the homesteaders, also called nesters, who filed claims on public land even when it was on the stockmen's ranges. To protect their ranges the cattlemen began stringing the new barbed wire around their claimed boundaries, and the old open range quickly vanished except for a few isolated small areas. With the new fences came the end of the old pattern of stock raising, for the new landholdings demanded new management methods.

The barbed wire fence marked an end to the West of the cowboys, roundups, trail herds, and wide-open cow towns—the Wild West so glamorized by later generations. This romantic period lasted about twenty-five years, from the close of the Civil War to the end of the open range. While some small out-of-the-way areas in the West still carried on in the old style for another twenty years, cattle raising and horse raising generally settled into a more prosaic routine.

In the days of the open range a cattleman first secured by one means or another a narrow strip of land along a good stream. His control of the water for the stock gave him control of the pasture on public lands on both sides of the stream as far back from the water as a cow could walk for a drink—not more than five miles. Thus for each quarter section of land he owned, the stockman controlled sixteen hundred acres of pasture. He located the buildings of his home ranch on the bottom land near the creek and built his ranch house, bunkhouse, barn, corrals, and blacksmith shop. This was the headquarters for all operations and home for the cowboys when they were not on roundups or trail drives.

An old Texas account speaks of the cowboy: "The cowboy is a man attached to a gigantic pair of spurs. He inhabits the plains of Texas, and is successfully raised as far north as the thirtieth degree of latitude. He is in season the year round, and is generally found on the back of a small mustang pony. . . .

"This fact has given rise to a widely diffused belief that the cowboy cannot walk. . . . Some scientists however, dispute this as several specimens have been seen—under the influence of excitement and while suffering from intense thirst—to detach themselves from their mustangs and disappear into business houses where their wants were attended to by a man wearing a diamond breastpin and a white apron."

This description from *On a Mexican Mustang Through Texas*, by Sweet and Knox, contains a large portion of truth. A cowboy—also known as a cowhand, cowpuncher, cowpoke, waddie, or vaquero—was, with his horse, a basic ingredient in western range life. He could be a cowboy without a cow, but not without a horse.

Francis Haines, *former professor of history at the University of California at Berkeley, is author of* The Buffalo; Appaloosa: The Spotted Horse in Art and History; *and many other books and articles on the American West.*

Horses not only played an important role in the development of the West, but were also favorite subjects for that bevy of artists who depicted the early frontier, from Catlin to Koerner. The works of three of the most famous—Remington, Russell, and Wieghorst—are used to illustrate this article.

C. M. RUSSELL

THE BIG HORN MEDICINE WHEEL —

BY JAY ELLIS RANSOM

THE BIG HORN MEDICINE WHEEL, a prehistoric Indian ceremonial shrine located high on the ten-thousand-foot crest of Medicine Rim in northern Wyoming's Big Horn Mountains, is like a primitive American Stonehenge, deserted and desolate for centuries, owned only by the western winds that sweep forever the high country of the Wyoming-Montana border. Here, the myths and legends of the red man of a thousand or more years ago were enshrined in voiceless stones that may, yet, speak faintly to the scientific mind.

However, fifty years of thoughtless vandalism have lowered that voice to less than the echo of a whisper on a summer breeze, a ghostly supposition spanning unnumbered centuries to a time whose legends have been lost forever, even to the Indian tribes who told the first White voyageurs about it. For the Dakota Sioux, Gros Ventre, Crow, and Arapaho—too superstitious to visit the almost unreachable site and knowing of the Medicine Wheel only by generations of word of mouth—had the same story to tell: the strangely configured shrine was ancient when their ancestors reached the valleys of the Missouri, Yellowstone, and Big Horn rivers in the dark shadows of their own legendary pasts. Even the Utes, Paiutes, Bannocks, and Shoshoni of the Great Basin states no longer remember.

I made my first visit to the Medicine Wheel with my father in 1921, when I was seven years old. There was only one way to reach the Medicine Wheel then: climb Medicine Rim via the tortuous three-mile-long prehistoric Indian trail. In places through the first long steep rise of yellow pines, the trail had been worn three feet deep by ancient moccasined feet.

The trail crested onto the summit of Medicine Rim well to the west of the Medicine Wheel. In the windless cool of midmorning we made our breath-catching way along the faint track through fringes of grotesquely gnarled timberline spruces, scarcely taller than a man, gaining altitude slowly.

THE WHEEL, actually about eighty feet in diameter, lay sprawled over the middle of the limy upthrust halfway between the two dropoffs—an ordered outline of circular rim, hub, and spokes almost lost and indistinguishable among the miscellany of frost-shattered rocks scattered everywhere over the one-hundred-yard-wide plateau. I found a quartz-white arrowhead, then part of an obsidian spear tip. The nearest obsidian, I had been told, was one hundred miles to the west in Yellowstone National Park.

A 1921 photo of the original Big Horn Medicine Wheel. The author is seated on the center mound.

The Medicine Wheel, showing the rock wall built in the early 1930s around the original stones.

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I began to notice, then, the stones that made up the Medicine Wheel; they were different: a hard glistening crystalline white, unlike the lime rocks of the rim which were coarsely granular and a dirty grayish-white. "Those are quartz stones," my father said, "brought here by the wheel's builders from a great distance away. There's no quartz in this part of the Big Horns, just limestone."

There were eighteen fairly straight "spokes" running from a central mound of piled-up rocks (the "hub") to the rim. But I noticed, too, verifiable in the photographs, that the spokes in the north quadrant seemed to be widely spaced, whereas those making up the south half seemed too close together, as if the builders had started in the west and moved around the north section to the east, then began crowding the spokes so as to end up with eighteen of them. Shadow spokes showed where many stones had been kicked aside by wandering elk or bear over the centuries, producing several more irregular half-spokes. (The photographs show a confusing maximum of nineteen, or twenty-two, spokes, depending on how one estimates their lineages. However, I believe my original on-the-scene count of eighteen is most likely correct for reasons explained below.)

In addition to the spokes and almost equally spaced around the rim were five circular rock mounds, much smaller than the central hub and differently constructed. Whereas the

Continued on page 62

JAY ELLIS RANSOM

AN AMERICAN STONEHENGE?

JAY ELLIS RANSOM

In this 1955 photo of the wheel (above), the wall has been replaced by a barbed-wire fence. The stones were used to reconstruct the wheel after vandals removed the quartz.

On the summit of this 10,000-foot-high limestone formation rests the Medicine Wheel. The old Indian trail climbed the rim and crested at the far left.

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Further observations on recent writings about the West's controversial heroes

The West's Gunmen: II

BY GARY L. ROBERTS

Legend attributes many admirable qualities to the western gunfighter—courage, honor, a keen sense of right and wrong, the role of civilizer, and devotion to high ideals of personal conduct and public responsibility. It is a congenial and familiar image with many antecedents in the folklore and popular literature of the American West. In the works of Walter Noble Burns, William E. Connelley, Stuart N. Lake, and a host of followers, the legendary image found expression as history. The gunman became an "epitomizing symbol," representing "the exact combination of breeding and human experience which laid the foundations of western empire." However, in their zeal to give the gunfighter great historical significance, Burns, Lake, and Connelley created demigods whose historical credibility was negligible. Inevitably, the search for the true identity of the gunfighter produced a revolt against the image.

Yet, even during the time that Connelley and Lake wrote, there were those who found the hero image difficult to accept. George W. Hansen questioned Hickok's reputation in an essay on the McCanles fight for *Nebraska Historical Magazine* as early as 1926, the same year that Wilstach's biography appeared. The Arizona historian, Frank C. Lockwood, concluded that Wyatt Earp was both "a cold-blooded killer and a very suave and crafty dissimulator," in his *Pioneer Days in Arizona*, published the year after *Wyatt Earp: Frontier Marshal*. In 1936, Floyd Benjamin Streeter, in *Prairie Trails and Cow Towns*, challenged Lake and Connelley on many of the basic issues.

The perceptive Eugene Manlove Rhodes attacked the fundamental methodology of the legend-makers in an article written in response to Walter Noble Burns's *The Saga of Billy the Kid*. "My quarrel," he wrote, "is with the interpretation of the facts, the twisting of the facts, the emphasis only on such facts as would serve a partisan purpose, the swift gliding over facts that would defeat that purpose, the admixture of credible evidence with rumor, surmise, opinion, innuendo, and maudlin sentimentality." Rhodes was not a historian, nor did he ever claim to be, but his observations isolated the common failure of the legend-makers.

Another serious and effective challenge to the myth was articulated by William MacLeod Raine and Eugene Cunningham. Although novelists by profession, both men seem to have sensed a responsibility to relate accurately and faithfully the gunman's era. Cunningham once wrote angrily to a friend concerning an author-friend noted for carelessness and prevarication in his writing: "Did he ever know what a *lie* is? I have asked myself many times. Or just Common Decency? Or was he (simply) incapable of seeing anything but material to be twisted and distorted *at his fancy* to make a story?"

This spirit also motivated Cunningham and Raine to be questioners and critics. Writing of Stuart Lake's account of the Tombstone troubles of Wyatt Earp, Cunningham declared that "Earp men adopt the 'whole hog' theory as their method —and the difficulty with this all-or-nothing view is its essential fallacy where human beings are concerned, its claim that only black and white exists—and never a touch of gray. It is a juvenile and hero-worshipping point of view."

This flaw was exploited more effectively as a growing awareness and the increasing availability of newspaper and documentary sources heightened skepticism. As old-timers were vanishing, these "new" sources became the most significant link to the historic past, the ultimate authority on controversial questions. The demand for newspaper accounts and legal records grew, and the dissemination of these materials portended a brighter historiographical outlook.

Healthy skepticism and attention to the sources were reflected in a variety of publications in the decade of the 1950s. Ramon F. Adams, in his *Six-Guns and Saddle Leather*, called attention to the sad state of affairs in writing about the gunman. Billy the Kid remained the most written about character in the American West, but researchers like Maurice Garland Fulton, Robert N. Mullin, Jefferson C. Dykes, Philip J. Rasch, and others brought new information to his story. Late in the fifties, two books appeared that reflected this trend: Frazier Hunt's *The Tragic Days of Billy the Kid* and William A. Keleher's *Violence in Lincoln County*. Much work remained to be done, but the picture was changing. Other publications made inroads into the legends of frontier characters. The heroes were being toppled from their pedestals and there appeared to be a new maturity in much that was published.

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Ready Guns, ***painted in 1920 by W. H. D. Koerner.***

ON ANOTHER FRONT, in response to a phenomenal demand for information on the six-shooter gentry of the cattle towns, Nyle H. Miller and Joseph W. Snell of the Kansas State Historical Society, began the laborious, systematic task of unearthing contemporary newspaper accounts of "wild and woolly" cowtown Kansas. In 1963, they published an encyclopedic reference work, which presented newspaper accounts and public documents previously inaccessible except to the most diligent researchers. *Why the West Was Wild* remains the most significant contribution to the understanding of the gunman. Miller and Snell presented the evidence in its original form and cautioned against the acceptance of TV images. They left it to others to interpret.

Revision always calls to account the writers of the past, and the legends that had obscured Hickok, Earp, the Kid, and others were an open invitation to legitimate, even indignant, rebuttal. In 1956, for example, William MacLeod Raine reviewed the writing on Wyatt Earp and concluded that as "a maundering old man with visions of past grandeur, he found not only one but two writers of ability who listened to his tall tales and dressed them up attractively for the public."

Yet there was a disturbing note in some of the criticism. When Frank Waters denounced Stuart N. Lake's biography of Earp as "the most assiduously concocted blood-and-thunder piece of fiction ever written about the West, and a disgraceful indictment of the thousands of true Arizona pioneers

COURTESY OF ROBERT N. MULLIN

Henry McCarty as a child. This photograph of Billy the Kid was collected from the effects of John B. Morrill, who operated an opera house in Silver City where young McCarty performed.

rather than provide a richer historical synthesis. It is a less demanding task because it is based upon disagreement with prevailing views. It requires the location of sources that disagree; usually it does not require the critical examination of that evidence. It is enough to question.

Few would deny the need for questioning the transparent absurdities of the myth, particularly as portrayed by television series celebrating various western characters in the 1950s. Certainly, in the hands of some writers, the debunking trend reflected a genuine concern for the state of western history. Perhaps it also reflected a growing cynicism about the motives of men, which made the Earps and Hickoks of the past seem anachronisms of an earlier romanticism now difficult to understand. And, a growing awareness that Wyatt Earp, frontier marshal, was something that would no longer sell books or magazines prompted some to take advantage of legitimate inquiry to impose new distortions.

As usual, the most blatant excesses came in the popular magazines, rushing to cash in on the new trend with loud claims to authenticity. What the careful used with restraint, if not objectivity, a new generation of "rocking chair historians" seized with vigor, producing prose as purple as any produced a generation earlier. Not content with the arguments that could be supported with evidence, the magazine hacks created "evidence." Past writers, particularly Lake and Connelley, were bitterly attacked by men who had neither the talent nor the research ability nor the understanding of the West's history of those earlier writers.

In this form, debunking permitted no departure from the objective—the exposé of western heroes. Nothing that might reflect credit, however slight, could be tolerated. Instead of the handsome, courageous heroes of the past, the debunkers offered a set of cowardly backshooters devoid of any vestige of moral character, courage, or markmanship. Even physical characteristics changed. Earp was no longer the mustachioed "Lion of Tombstone" but a "cadaverous" and sniveling weakling. Hickok was now "effeminate," or worse, not the *beau idéal* of the earlier legend. And Billy the Kid was a hideous cretin instead of Burns's devil-may-care youth.

But despite the obvious shortcoming of such writing, some credence—even applause—was accorded these ludicrous efforts because, at least, they were not repeating the old legends. As long as such debunking was confined to western pulps and "men's" magazines, it was of little consequence, but the trend grew increasingly respectable. Magazines like *Time* took their punches at the "fighting pimps" of the cowtowns, recording gravely how Bat Masterson hid behind a piano to avoid meeting a Texas gunman and how Earp made a fortune herding whores and knocking cowboys senseless. Even prestigious *American Heritage* attacked the myth in an article on the "Wild, Wild West."

BOOT HILL MUSEUM, DODGE CITY

Billy Brooks—gunfighter, lawman, and horse thief—who in 1874 was hanged by a lynch mob in Wellington, Kansas.

KANSAS STATE HISTORICAL SOCIETY, TOPEKA

A family portrait of James Butler (better known as "Wild Bill") Hickok, snapped in the early 1870s.

BY THE EARLY 1960s, the debunkers dominated writing about the gunman. The new decade was launched with the publication of *The Earp Brothers of Tombstone* by Frank Waters, who resumed his earlier attack on Wyatt Earp and the myth. The next year Harry Sinclair Drago's *Wild, Woolly, and Wicked* appeared. Ed Bartholomew soon followed with a two volume treatise on Wyatt Earp.

These works posed more serious problems. Because of the sensationalism apparent in the pulp magazines, they could be discounted, but Waters, Drago, and Bartholomew were not of that type by training or inclination. They were respected authors and researchers. Their debunking was of a different variety, one with some claim to the attention of students of the gunfighter. Waters's book, based on the memoirs of Mrs. Virgil Earp, was "an exposé of the Tombstone travesty, laying bare under the scapel of her [Mrs. Earp's] merciless truth the anatomy of one of the legends contributing to the creation of a unique and wholly indigenous myth of the American West." Drago, bringing to his task a style that had made him a favorite western novelist for years, recounted the history of the Kansas cowtowns with particular care to puncture the legends of Earp, Hickok, Masterson, and others. Bartholomew's mountains of evidence attested to his tenacity in uncovering obscure materials on his subject.

These books—and articles and books using them as authority—received wide acclaim by reviewers and acceptance by many, perhaps most, students of the gunfighter. The response of many is reflected in Ramon F. Adams's statement concerning Waters's book. "At last," he wrote, "we have a book which dares to tell the truth about the Earps, refuting the many highly romantic and imaginative tales told by Burns and Lake."

Yet it is not Frank Waters's blistering indictment of Earp and Lake that gives his book value, as Adams implies, but the simple story of a wizened old lady, bitter, jealous, and somehow appealing. It is a very human account with all the limitations and values that are associated with reminiscences. Unfortunately, it is also a story often lost in a parade of evidence of questionable reliability. Drago harangued against the errors of others and made hundreds of his own. Bartholomew either hurried his account or was uncertain of how to use his material.

His book is hopelessly confused and poorly organized. It deluges the reader with what one reviewer described as "vain, repetitious, and loosely connected pseudo-facts," all of which are aimed at tearing Wyatt Earp from his legendary roost. Instead of clarifying and illuminating the gunfighter, instead of rescuing the subject from the realm of pseudo-history,

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all such works as these merely confuse the historical picture.

Certainly, they point out past mistakes and add new knowledge to the study of the gunman, but they fail to offer a meaningful alternative because of their essentially negative view. The debunkers are obsessed with the destruction of the myth, which in turn affects their perspective. An understanding of the past is only incidental to the more important goal of "proving" the falsity of earlier accounts. Debunking's narrow purpose produces an essentially anti-intellectual view.

First, it tolerates no dissent. Those who disagree are summarily dismissed as agents or victims of the myth. Their method of dealing with those who disagree with their own narrow point of view reflects a closemindedness that injures not only those who can be justly criticized, but others who disagree on the basis of equally diligent research. This same attitude causes them to accept even the most shaky evidence, if it fits their purposes, and to ignore or minimize the errors of those who agree with them. Ironically, those authors who have damned Lake and Connelley for being the victims of their own prejudices have fallen into the same trap.

Secondly, the viewpoint disdains scholarship. "God save us from scholarly books," one of the debunkers writes. This view permeates much that has been written about the gunfighter, apparently under the assumption that the standards of evidence employed by historians deprives western history of its saddle sweat and "he-man" action.

Thirdly, debunking criticizes but is not critical. In much writing, the standard is not how reliable evidence is but whether it fits a preconceived conclusion. Unfortunately, the availability of records seems to have provided only another body of materials to be used out of context and selectively. The more extensive use of contemporary sources has been prostituted to opinionated diatribes, which rely upon the error of earlier writers to prove the validity of preconceived notions.

Finally, the debunkers have failed to provide a convincing synthesis of their point of view, relying instead on loosely connected bits of evidence indiscriminately presented without regard for the accepted procedures of evaluation which support their hypotheses. The natural selectivity of the historian should be based upon a stronger foundation than the shaky assumption that because one thing is false, the opposite must be true. Its acceptance permits a new syndrome of half-truths, semi-fiction, and twisted logic—an "anti-myth"—given added credence by the uncritical use of contemporary materials.

The use of sources lies at the heart of much of the problem. The popularizers were no better prepared to evaluate newspaper sources than an earlier generation had been to appraise the reminiscences of old-timers. Little allowance, for example, was made for the prejudices, politics, and personalities of frontier editors who were accustomed to great latitude in journalistic policies. With little training in historical method and no interest in cowtown politics or social institutions, the

C. M. Russell drawing of Billy the Kid revenging the death of Tunstall.

popularizers continued the superficial exploitation of the more lurid stories, not improved in quality but given respectability by appeal to primary sources.

THE INCREASED AVAILABILITY of sources led to the assumption that if an event was not reported in the newspapers it did not occur. The fallacy of this assumption is immediately apparent by applying that standard to any other field of history and attempting to write an account based solely on newspaper sources. The newspapers provide only a partial record, one colored by a number of factors.

It is likely that many events, even some deemed "important" by later writers, escaped the coverage of frontier editors who, unfortunately, were not fully briefed on which gunmen would become legendary. Hence, the arrest of a cattleman by a town marshal may have seemed insignificant to one editor, the conversation of a Texas gunman with local law officers a matter of course to another. The desire to play down violence, the use of the press against political opposition, and other considerations distort the completeness of the newspaper record. Conversely, papers of political opposition, openly partisan, were likely to take verbal pot-shots at law officers of the opposing faction.

The dilemma of conflicting source information is readily apparent to all who have studied Billy the Kid or Wyatt Earp. As one authority puts it, "Alexander McSween was pictured both as one of God's noblemen and a thieving villain in contemporary newspapers, and the contradictory reports of the *Epitaph* and the *Nugget* are classic examples of the problem of which or what to believe. Some allowance must be made for error and rumor in even the most reliable frontier journals.

Furthermore, the emphasis on contemporary source materials led to a tendency to play down the historian's role by the presentation of newspaper accounts with virtually no comment, implying the perfect reliability of such sources. This permitted writers to avoid evaluation of the evidence, de-emphasized the importance of historical interpretation based on that evidence, and encouraged the surreptitious presentation of only one point of view.

Such cautions seem almost elementary. They are not aimed at deriding the newspapers as sources. To the contrary, the newspapers constitute the most important body of records available to the student of the gunfighter, and the greatest failure in western writing has been too great a dependence upon secondary sources. However, news accounts must be used with the same caution as other sources. They must be critically analyzed in the light of all the evidence, not accepted on faith because of their timeliness.

As important as public records are, they provide only a partial view. They do not always provide the personal insights necessary to good history and biography. Diaries, letters, even reminiscences, add much needed perspective. Unfortunately, such documents are in short supply, and the subjects that are most interesting lie precisely in those areas where public records have only marginal value, where they must be supplemented by other materials. Moreover, the gunmen left few records, particularly about their nefarious activities. And even where such personal records have survived they may be regarded with skepticism or discounted entirely.

CARLYN LAKE

This 1928 photo depicts Wyatt Earp at 80. His wife called this the "banker picture"—the only portrait of which she really approved.

THOSE WORKS which have proven most substantial over the years share certain characteristics. They are not only carefully researched and thoughtfully constructed, they are well written, and demonstrate the importance of clarity and precision of statement. Moreover, they are written with no obvious rancor, no cause to champion. They do not find it necessary to deride previous accounts in order to be critical. This is possible because they are not embroiled in controversy but seek to understand it by allowing their evidence to stand on its own merit. They criticize, they correct, but more importantly, their works are tightly organized, cogently presented, based on reason, research, and synthesis of the evidence.

The 1960s produced some work of this caliber. Waldo E. Koop and Robert N. Mullin probed into Billy the Kid's childhood years, and the publication of Maurice Garland Fulton's *History of the Lincoln County War* in 1968 was a long awaited event. Joseph G. Rosa's careful biography of Wild

Continued on page 61

The second of a series on The Last Frontier: Following up on Robert Marshall's tree-planting experiment in Alaska

TO JUMP THREE THOUSAND YEARS

By SAM WRIGHT

FOUR BANDS of white Dall sheep watched us from across the North Fork of the Koyukuk River as we hiked up a thousand feet around the mountain cuts. On one promontory, a single ram stood overlooking the canyon below. Through the field glasses I could see that he had a great full curl of horns, so dear to the trophy hunter, and his sense of at-homeness in this great wilderness spoke in his surefooted posture on the brink of the precipice. I then noted where I stood in a similar place across the canyon and I too felt that surge of assuredness which wilderness gives so freely.

Robert Marshall had looked across this same canyon from a promontory thirty years before and felt this exhilaration. Little has changed here since then, I thought . . . the nearest pavement is still nearly three hundred miles away, and the closest settlement, a small Eskimo village in Anaktuvuk Pass, more than fifty miles west.

Marshall had given the name "Barrenland" to the creek where we had camped these past few days, and the description in his journal could have been this summer, 1968, instead of 1939: "We stopped for lunch at the edge of the foaming white water dropping from a bright green basin entirely devoid of any sort of tree growth. While Jesse and Nuterwick were making tea, Harvey and I followed that tributary upstream a couple of miles to a point where we could see the entire head of this valley. It was fascinating in its barrenness. So we called the drainage Barrenland Creek."

However, there has been a change since 1939, for on one side of Barrenland Creek—north of timberline and one hundred miles above the Arctic Circle—there is now a small plot marked by rocks and willow stakes which contains one hundred six-year-old white spruce seedlings. I had backpacked these trees over Dall sheep and caribou trails into these rugged mountains of the central Brooks Range of Alaska, and planted them in the wilderness on the same spot where Robert Marshall, explorer and forester, had sown spruce seeds nearly thirty years before.

This new planting is part of a continuing test of a theory. But more than this, if these trees survive and continue to grow, they will be a living memorial to Marshall, who mapped and named many of the tributaries and mountains of the Koyukuk River drainage.

Except for the Bob Marshall Wilderness in the state of Montana, too few people outside the Wilderness Society ever heard of Robert Marshall. Fewer still knew of his role in the creation of a system of wilderness areas in the national forests while chief of the Division of Recreation and Lands, a position created for him in 1937. Some may recall that he was author of *Arctic Village*, a "biography" of a frontier civilization published in 1933, which became a best seller and was hailed by explorers and sociologists.

But it is with the Brooks Range in Alaska that Bob Marshall will become increasingly identified, as John Muir became identified with the Sierra Nevada in California. The stark and awesome wonder of the Brooks Range is not easily re-created in writing, yet Marshall's enthusiasm in the journals of his explorations, mapping, and mountain climbing, captures its vividness and sense of adventure. His irrepressible excitement and concern for the wild is infectious, particularly to those of us who have little immunity to it.

ROBERT MARSHALL had a theory that the northern timberline in this part of Alaska was not so much the result of unfavorable environment for tree growth, but rather the lack of sufficient time since the last ice sheet receded for the forest to migrate farther north. One reason for this view was the fast growth of the most northerly trees. The ages of spruce at timberline indicated that these trees had the same growth patterns as those farther south. As he wrote in his 1930 journal: "According to my theory, the spruce stands eventually will extend to the Arctic Divide and cross over into the sheltered valleys north of the divide. If this is so it should be

possible simply by sowing seed to extend the timber line far north of where it now is."

Based on his estimate of spruce-migration rates, if the experiment were successful, it would constitute an advancement of timberline about three thousand years.

He planted white spruce seeds from Lakes States Forest Experiment Station, Wisconsin, on Barrenland and Kinnorutin creeks north of timberline, just four months before his fatal heart attack.

I found no record that anyone had followed up Marshall's experiment to test his theory. I wrote to his brother, George Marshall, who had edited Bob's journals and was then president of the Sierra Club and on the governing council of the Wilderness Society, to learn if he knew whether anyone had since visited these plots. As far as he knew, no one had returned to Bob Marshall's plantings in the wilderness since his death in 1939.

This was the excuse I needed. I had read of this great range that stretches five hundred miles across the wildest and least-known part of Alaska. Like Bob Marshall I had the notion that exploration should have a social justification, and here it was. I was on a quest for Marshall's trees. But more than this, I went because I had never been there before.

In August of 1966, accompanied by a student in the graduate school where I was teaching, I began my quest. We hiked from isolated Chimney Pass Lake where a small bush plane on floats had left us. Climbing over the mountains, we continued up the Hammond River to Kinnorutin Creek where Marshall had planted seeds in the summer of '39. I found no evidence that they had either sprouted or grown. The same was true of his plots on Barrenland Creek, which we reached after climbing over two passes, beyond the confluence of the North Fork of the Koyukuk River and Alinement Creek.

In July of 1939, Bob had written in his journal: "After lunch I repeated the experiment which I had tried with negative results nine years before—the experiment to test my theory that lack of time, not unfavorable conditions, had prevented the further progress of the northern timber line. I had brought with me this time white spruce seeds, which the Lakes States Forest Experiment Station had provided.

"I marked two square plots on a flat about ten feet above the creek. On the larger one, 12 by 12 feet, I sowed the seeds directly among the sphagnum moss, *Dryas octopetala*, and dwarfed willow. On the other plot, . . . 8 by 8 feet, I scraped away the vegetation and sowed the seeds on mineral soil."

Although in 1966 I found no evidence that Bob Marshall's plantings had been successful, I still felt his theory a valid one. My plan was to return in the future and replant in his original site on Barrenland Creek.

BILLIE WRIGHT

SAM WRIGHT

On this spot above Kinnorutin Creek, Bob Marshall planted white spruce seeds in 1939. Wright (pictured above) found no trace of any sprouting.

Chimney Pass Lake (at left), where the author landed by bush plane to begin his search for the trees.

XUM

THE OPPORTUNITY CAME two years later, when I included in my sabbatical study in human ecology the inland, mountain Eskimos of Alaska—the Nunamiut who are gathered in a village at Anaktuvuk Pass. This settlement is at their ancient campsite on the caribou migration route through the center of the range, forty miles north of timberline and accessible by plane. My plan was to hike from Anaktuvuk Pass about fifty miles along the top of the range to Barrenland Creek. I would also need to detour south far enough to gather seedlings.

With my wife as companion and photographer, we estimated the time and supplies needed for such a trip into these rugged mountains and planned accordingly before flying from Fairbanks to Anaktuvuk Pass. During our stay in the village, it became evident that our hike through the rough terrain and over the passes to Barrenland might be an exceptionally hard one because of high water in the rivers from early rains. The mosquito hatches were also unusually heavy, and having hiked this wilderness before, I had no illusions as to its difficulty. There is quite a difference between wading hip deep through an icy stream and attempting to swim it.

One of our Eskimo hosts suggested that we discuss our plans with the pilot of the mail plane to Anaktuvuk Pass, a big-game guide with a hunting campsite in the general area where we wanted to go. Fortunately, when he heard our plans and spread a map on the gravel airstrip, we discovered a small lake on the summit of the range where he felt he could land his small float plane. We estimated it to be only eight air miles from Bob Marshall's plots on Barrenland. Even so, eight air miles in the precipitous canyon headwaters of the Koyukuk River meant more than twice as far on foot, and over slopes usually traversed only by mountain sheep. It also meant an additional hike of more than twelve miles south to timberline to collect seedlings. Compared to the hundred-mile backpack trip we had originally contemplated, this seemed simple.

Good fortune comes in interesting forms. In our case it was one hundred four-year-old white spruce seedlings from the Forestry Sciences Laboratory at the University of Alaska. This meant we did not have to make the extra trip south of timberline to search out and dig seedlings. It also guaranteed the age and quality of the trees we would plant, provided we could get them there in good order. We scheduled our flight.

Our bush pilot was provisioning his sheep-hunting camp and had warned us that it would be a crowded trip. As we arrived at the float pond where his small plane was tied to a stake on shore, I wondered how three people, several cartons of groceries, backpacks, rifles, trees, two five-gallon cans and a fifteen-gallon barrel of gasoline were going to be squeezed aboard, much less get airborne. We filled every spare inch of space, including our laps. Then, using the full length of the pond, we rose toward the hills north of Fairbanks and climbed steadily to six thousand feet above the Indian settlement of Stevens Village on the Yukon River. A large tundra- and forest-fire we had seen while flying to and from Anatuvuk Pass appeared to have increased in size. Its acres of smoke drifted north across the hills. Our pilot said it had been burning for nearly a month.

At my request he flew over Chimney Peak and the small lake where I had landed two years before to begin my search for Bob Marshall's plots. Below was the saddle in the mountains where we had photographed a grizzly bear, the upper Hammond River which Marshall mapped, and Kinnorutin Pass where we had climbed under Apoon's glacier. We flew on around Mount Doonerak's rocky crags and across the North Fork of the Koyukuk. Shortly after noon, we dropped down on the little lake at the summit of the range.

Backpacks, trees, rifle, and camera were carried ashore. Our bush pilot said he would pick us up here in four or five days, weather permitting. "Have a good time," he said, and took off toward the north.

IN THE SILENCE that followed we looked at each other and smiled. I loaded the rifle. My wife checked the camera. Then tying our precious cargo of trees on top of my pack, we started across the tussocks to our first crossing of the North Fork of the Koyukuk River.

That evening, August 4, 1968, I wrote in my journal:

> After wading the icy North Fork, the walking was tedious through the sedge and muskeg, much too familiar from the 1966 hike into Anaktuvuk Pass. Many birds—Longspurs and Horned Larks—but the only large animals, two Dall sheep on the slope to the east. Made camp at the canyon mouth on the second tributary south of summit lake which I called 'Nuliak Creek' in honor of my companion. The sky is turning black with clouds and the wind has picked up. With a caribou antler for a post, I put up a tarp in front of the tent to keep the willow sticks dry for a morning fire. To bed at 10:00 P.M.

MONDAY, AUGUST 5, 1968

It was a good thing we prepared for a wet camp, as it rained all night and the wind blew the tarp with a continual flapping. Low clouds reached the ground this morning with a heavy mist falling, but no hard rain. The cardboard box of spruce tree seedlings had absorbed so much water it was disintegrating. It was necessary to wrap the box up net-like in nylon cord, carried for emergency use.

The clouds kept the mountain tops covered as we rimmed along beneath their ceiling. They broke once near the edge of a great cut before Barrenland Creek, and just above us a band of seventeen Dall sheep stood and watched while I took off my pack to wind the camera. They ran up the slope into the clouds, but not before we caught them on film.

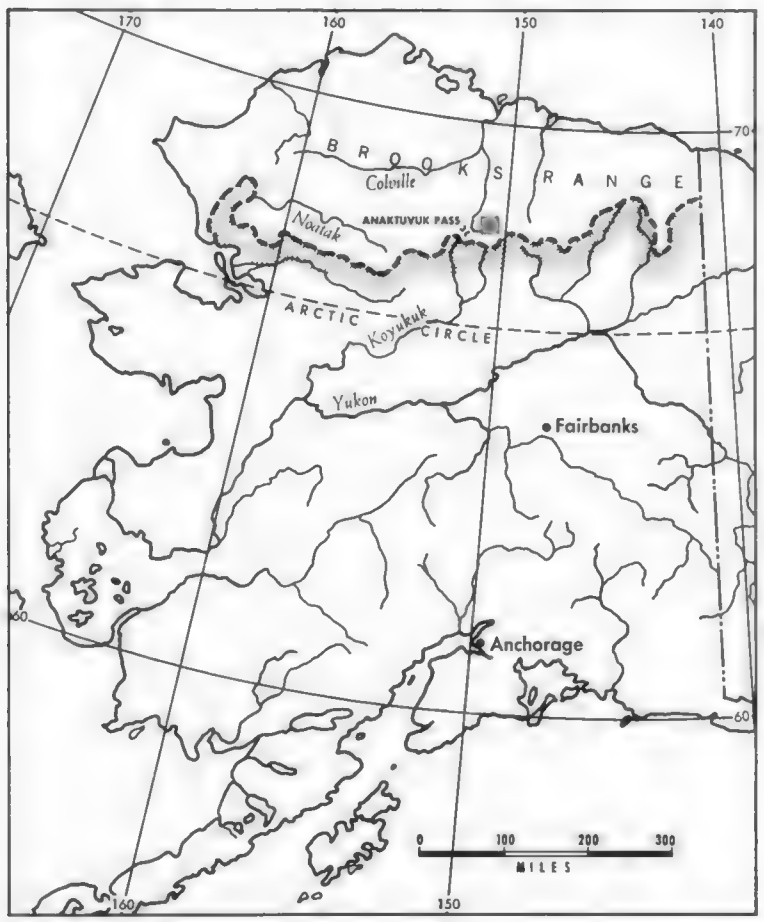
By 7:00 P.M., rimming up Barrenland Creek's north side, we looked down on the tree planting site where Bob Marshall's stakes still marked his plot after nearly thirty years of arctic freeze and break-up. Because the weather was unpredictable, I planted a few trees immediately. We wanted the site recorded on film. The rain began again before the tent was fully up. We pitched it facing a large rock so the wind would not blow on our fire under the flysheet. The storm soon became driving sleet mixed with rain.

All the gear is where it will stay dry under the tarp, and we have arrived with our trees intact. As the wind and rain buffet the

tent, we talk of the inland Eskimos, who for thousands of years listened to the same sounds on their caribou skin shelters. There is a primeval quality of peace in this wilderness, a contentment at being warm in a snug tent, with a full stomach, a thick mattress of tundra, a sense of accomplishment.

TUESDAY, AUGUST 6, 1968

It rained most of the night but was breaking up before we finished breakfast. Spent the day planting. Marshall's old site is about 100 yards upstream from the first main tributary entering Barrenland Creek from the north. The location, as Bob described it, 'on a flat about ten feet above the creek,' refers to the elevation.



On this map of Alaska, the red square near Anaktuvuk Pass represents the area in which Robert Marshall in 1939, and Sam Wright almost thirty years later, planted white spruce seedlings to test a theory. The spot is significantly just beyond the present range of tree growth, north of the Arctic Circle.

At present the location is about 100 feet north of Barrenland Creek. I built four rock corners around three-foot willow stakes to re-mark the plot, leaving Bob's markers as they were found. One of his two plots had washed out; only one willow stake remained at a corner. I thought it fitting to take it back to his brother, George, who in editing Bob's journals of exploration and mapping of this wilderness, had also come to know and love this land.

In order to protect the site from possible vandalism (as geology exploration by helicopter is no respecter of distance and rough terrain), I left the following inscription in both the northwest and southwest rock corners, placing one in a tobacco can and a copy in a peanut can:

NOTE: WITHIN THESE MARKERS ARE PLANTED 4 YEAR OLD WHITE SPRUCE SEEDLINGS FROM FORESTRY SCIENCES LABORATORY, UNIVERSITY OF ALASKA, GIFT OF DR. LESLIE VIEREK. PLANTED AUGUST 6, 1968, BY SAM WRIGHT ON SITE OF PLANTING OF SEEDS 29 YEARS EARLIER BY ROBERT MARSHALL. OLD MARKERS OF WILLOW—ROBERT MARSHALL'S ORIGINAL SITE MARKERS. THIS REPLANTING, A CONTINUING TEST OF BOB MARSHALL'S THEORY OF NORTHERN LIMIT OF SPRUCE GROWTH. PLEASE DO NOT DISTURB AND REPORT TO SAM WRIGHT.

(signed) Sam Wright, Tuesday
August 6, 1968.

ON OUR WAY BACK to rendezvous with the bush pilot on the summit of the pass, I stood looking across the canyon of the North Fork. On the promontory, the single ram still stood overlooking the canyon below.

I thought how tragic it would be to lose this last great wilderness to the grind of road-building equipment and the clutter of "civilization." Yet in the name of progress, this seems to be the destiny of all wild places in our western world.

We hoisted our packs, and as we edged along the mountainside above the tumbling river, I made a pledge to myself. I had already picked up the trail of Bob Marshall in replanting on his site. Our destination is also shared in a common goal—the preservation of this wilderness, that there may still remain on this continent a wild place where the song of wolves and the migration of caribou might remind us of who we are and from where we came.

This pledge was no light decision. We did not return to the San Francisco Bay area at the end of the summer. Instead we moved into a 12 x 12 foot log cabin in the heart of the Brooks Range, from which we can speak "on the ground" for this last great wilderness.

It was back in 1938 that Robert Marshall wrote: "I would recommend that all of Alaska north of the Yukon River, with the exception of a small area immediately adjacent to Nome, should be zoned as a region where the federal government [and the State of Alaska] will contribute no funds for road building and permit no leases for industrial development.

"Alaska is unique among all recreational areas belonging to the United States, because Alaska is yet largely wilderness. In the name of a balanced use of American resources, let's keep northern Alaska a wilderness!"

Although survey crews have already mapped routes across the range for roads, oil pipelines, and a railroad, the wilderness of the Brooks Range is still the land Bob Marshall knew. History is not only in the past. It is what we do with the present. And in the arctic wilderness north of timberline there is now a small grove of trees that symbolizes the future.

Sam Wright, *a professor of social ecology, is presently living in, observing, and writing about the central Brooks Range, Alaska.*

WELLS, FARGO BANK HISTORY ROOM, SAN FRANCISCO

WELLS, FARGO & CO'S EXPRESS.

$1,000 REWARD!

CHARLES WELLS BANKS, who up to November 1, 1886, was CASHIER of the Express Department of Wells, Fargo and Company, at San Francisco, Cal., on which date said Banks absconded, a defaulter in a sum exceeding $20,000.

Wells, Fargo and Company will pay $1,000 Reward for the arrest and delivery to me, at any jail, in any of the States or Territories of the United States, of the said Charles W. Banks.

In addition to above reward of $1,000, 25 per cent will be paid of all monies recovered from said Banks and turned over to said Express Company.

Description of Charles W. Banks.

AGE, 47; HEIGHT, about 5 feet, 8 or 9 inches; WEIGHT, about 145 lbs.; HAIR, black, slightly grey, thick and *curly;* EYES, small, cold grey, glance quick and comprehensive; reads with glasses; NOSE, flat at the nostrils, nostrils large and distended, end of nose decidedly turned up; BEARD, usually worn full, but had it removed before leaving; was WOUNDED in left leg, favors it very slightly; was troubled with varicose veins, wears elastic on legs; TEETH, false; DISPOSITION, quick and nervous; TOBACCO—smokes, does not chew, snuffs moderately; NATIVITY, England, with very slight English accent; was naturalized in New Orleans May 14, 1867; DRESS, always neat, collar always turned down, as appears in photograph; HANDWRITING, a good running hand, fast writer, imitates signatures well and readily; BUSINESS QUALIFICATIONS—a first-class accountant; quick at counting coin and notes; in early life was accountant in an iron establishment and also clerk in a wholesale artificial flower-house; was in New Orleans under General Banks as quartermaster's clerk; was in Washington as chief clerk in Freedmen's Bureau; was in New York custom-house as inspector, about 1866; arrived in San Francisco in 1871; POLITICS, Republican; SOCIAL HABITS—was a member of Union and Bohemian clubs of San Francisco; fees all waiters and menials freely; is inquisitive by nature; controversial sometimes in conversation; not inclined to question prices with tradesmen; buys good articles; is open-handed, has a streak of kindliness, vain of his appearance, likes notoriety, cultivated the habits of a *bon vivant* club man, was very familiar with brands of liquors and French dishes and wines; MEMBER OF MICROSCOPICAL SOCIETY of San Francisco; has a knowledge of scientific phrases and expressions, although he left school at 14; well informed on all current topics of the day, and few days before leaving disposed of his voluminous miscellaneous and scientific library; is of a speculative turn and familiar with S. F. stock market; has owned gravel mine and a vineyard, and talks understandingly on such subjects; WIFE now resident in New York, formerly from Cleveland, Ohio; he was at Centennial Exhibition at Philadelphia in 1876; is a Knight Templar, and member of Oakland Commandery No. 11 of California.

Wells, Fargo and Company will pay liberally for information furnished me which leads to his arrest, or discovery of his whereabouts if beyond the reach of extradition.

J. B. HUME,
Special Officer Wells, Fargo & Co's Express,
SAN FRANCISCO, CAL., Room 28, 320 Sansome Street.
November 8, 1886.

By RICHARD H. DILLON

WELLS, FARGO'S JEKYLL

LIKE THE ROYAL CANADIAN Mounted Police, Wells, Fargo and Company of San Francisco prided itself during the nineteenth century in always getting its man. This was so because of the talents of its chief of detectives, James B. Hume, ex-sheriff of El Dorado County, California.

Hume was hired in 1872 chiefly to reduce the number of successful stagecoach holdups and robberies of the firm's treasure boxes, but he shortly expanded his detective efforts to burglaries of company offices and finally to inside jobs of embezzlement. Thus his path crossed that of San Francisco's greatest absconder (except, perhaps, for Honest Harry Meiggs, the crooked alderman) and Hume's only peer in cunning. In Charles W. Banks, Jim Hume met his match as an antagonist.

Charley Banks was one of the most trusted executives of Wells, Fargo & Company. In fact, his middle name was Wells.

He was a gifted and apparently dedicated accountant who had been promoted to chief cashier of the company upon the urging of its secretary, James Heron. Banks was a strict disciplinarian as a supervisor during business hours, but outside the office he was the soul of charm. He was friendly and kind to the young clerks, and at the same time moved with ease in polite San Francisco society.

Eric Francis, who came to work for Wells, Fargo at the tender age of sixteen years, remembered Banks as a generous man who gave him railroad passes, franks for his correspondence or express shipments, and luscious French gumdrops from Marron's Candy Factory on Merchant Street. Banks even loaned the youngster his Mercantile Library borrower's card and the issues of the *Sun* that carried the popular serial, "Peck's Bad Boy."

Francis never met anyone who was Banks's equal in all-around business ability, whether it was a matter of adding up three columns of figures or writing any of five different hands in perfect penmanship. (Detective Hume would come to agree; in his reward poster for Banks he noted that he was a "first-rate accountant, quick at counting coins or notes.") Francis always felt that it was Charles W. Banks who turned him from a callow youth into a lively and quick-thinking young businessman. To the boy, Banks seemed able to do anything, and four times faster than anybody else.

The cashier appeared to be a good judge of men, too. When he sized up John Allman, he nicknamed him "Little Satan." Later, Eric Francis learned that Allman was a tough *hombre* indeed, who was rumored to have killed a man with a bowie knife. And when Fred Lipman first came to work, Banks said to Francis, "Do you see that young man? He has a brilliant future and will be heard from." So it was. Frederick Lipman became President of Wells, Fargo Bank in 1931.

CHARLES BANKS was obviously every inch a gentleman. He was handsome and distinguished looking, a Republican, and a Knight Templar of forty-seven years of age in 1886. He weighed about 145 pounds and stood some five feet nine inches in height. Banks wore a full beard to balance a shock of thick, curly black hair, dusted lightly with grey. He dressed well and was among the more prepossessing executives of the major express firm of the American West.

His duties at the company's headquarters at Sansome and Halleck streets gave him even more of a polish, since he came in contact with such distinguished visitors as governors Leland Stanford and Romualdo Pacheco, General Mariano Vallejo, millionaires James Ben Ali Haggin and Collis P. Huntington, author Henry George of *Progress and Poverty*, and the legendary ex-Confederate cavalry colonel, John S. Mosby, then United States Consul in Hong Kong.

Banks was a member of the exclusive Bohemian and Union Clubs and of the San Francisco Art Association. His main hobby was science, however, rather than art. He subscribed to numerous scientific journals that young Francis collected for him from a rented lockbox in the Washington Street post office; he owned the first oil-immersed microscope on the Pacific Coast; and he was a prominent member of the Microscopic Society of San Francisco. Occasionally, he showed some of his thousands of slides during the society's lecture meetings in Irving Hall on Post Street or in the Mercantile Library. It was probably Banks's scientific interests which attracted him in 1876 to Philadelphia to see the Centennial Exhibition.

The background of the cashier was as interesting as his demeanor was impressive. Born near Birmingham, England, on June 3, 1839, he had been an adventurous lad, running away to sea when he was but fourteen years old. Working his way to America as a cabin boy, he jumped ship in the United States and found a job in an iron foundry. His next position was clerk in an artificial flower factory where his ability with figures fostered a transfer to the accounts department.

Banks enlisted in a regiment of New York Volunteers and served with distinction (as did, it may be noted, Black Bart) during the Civil War. He fought in the battles of Sabine Pass, Texas, and Pleasant Hill, Louisiana, and had to accept a medical discharge from the army after a Rebel musket ball smashed his left leg at Pleasant Hill. He then became a quartermaster clerk for General Nathaniel Banks (no relation) in New Orleans.

Banks, who became a naturalized American citizen on May 14, 1867, became chief clerk of the Freedmen's Bureau in Washington, D.C., the agency that tried to integrate the newly-freed slaves into society. After working in New York for a time as a customs inspector, he migrated to San Francisco in 1871 and was shortly hired as an assistant in the cashier's office of Wells, Fargo & Company. It is quite likely that Banks embroidered somewhat upon his past career: there are indications that he transformed his New Orleans clerkship into the role of General Banks's aide-de-camp, and he certainly bragged to Fisher that he had worked with John Ericsson on the plans for the ironclad *Monitor*, whose famous battle with the Confederate armored ram *Merrimac* revolutionized naval warfare.

AND HYDE

The elusive embezzler who stumped the company's master detective

XUM

WELLS FARGO BANK HISTORY ROOM, SAN FRANCISCO

James B. Hume—Wells, Fargo's chief of detectives—was the nearest thing the West Coast had in the nineteenth century to an Allan Pinkerton. Hume seldom lost his man, but had to confess defeat in the case of Charles W. Banks, master of the "inside job."

On November 1, 1886, James B. Hume received the shock of his life when the trusted cashier of Wells, Fargo mysteriously disappeared. He often took the 4:00 P.M. train on Saturdays to his ranch on Howell Mountain, near St. Helena in the Napa Valley wine country, returning to the city on Sunday night. This time, he had Monday off as a holiday, too, and he told young Francis that he was going to his country place for a rest. Others heard that he was on his way to Russian River, on the coast north of San Francisco, for a spot of fishing in the redwood country during the long weekend ahead.

When Banks did not show up for work on Tuesday morning, a suspicious-by-nature Hume did a little checking. He investigated the cashier's accounts and found them short by "at least $20,000." (Hume was always loath to admit the exact sum of Wells, Fargo losses; he would put a bottom on the "take" for newspapermen but seldom would place a ceiling on the amount. It was probably more like $100,000 in the case of Charley Banks.)

A hurried investigation revealed that Banks had not entrained for either Napa or Sonoma County but had stayed in the city under an assumed name, J. Scard, in a room on Post Street, after shaving off his beard to change his appearance. Hume now found that Banks had packed his wife off to New York on a shopping trip and had sold his scientific library.

On November 8, 1886, the Wells, Fargo detective issued a reward flyer promising $1,000 for the arrest and delivery of Charley Banks to any jail in the United States. He did not demand a conviction; Hume had sufficient evidence to put Banks away if he could just get his hands on him. He then frosted the cake for bounty hunters by promising an additional 25 percent of any money recovered from Banks by Wells, Fargo.

As Detective Hume backtracked the culprit, he came to know Banks and his wife Fannie quite well. The Englishman smoked tobacco and used snuff. He was farsighted, used reading glasses, had varicose veins and false teeth, and still favored his left leg slightly because of the old war wound.

Banks's photographs showed him to be a handsome enough gentleman, but Hume let his chagrin affect his description of the wanted man. It was downright unflattering—"Eyes: small cold, grey, glance quiet and comprehensive; Nose: flat at the nostrils, nostrils large and distended, end of nose decidedly turned up."

Shortly, the detective learned that the erstwhile pillar of society had had hobbies other than science and microscopy. Banks liked to gamble on the stock market and was the owner of a vineyard (probably his Napa County "ranch") and a gravel pit in addition to a sailboat and a home in Oakland. Most surprising, Hume found that the cashier had maintained not one mistress but three! He learned that Banks not only patronized brothels but, by choice, the low cribs of San Francisco's Embarcadero wharf area and, ultimately, had invested in the ancient business. The "moonlighting" cashier of Wells, Fargo was proprietor of a seven-girl house.

To the embarrassment of the top management, their accounting whiz had placed his harem-for-hire in the old Nevada Bank building on the northwest corner of Pine and Montgomery streets. The detective found that Banks always bought the finest goods without questioning the price, tipped waiters handsomely, and was well acquainted with French dishes, fine wines and the best liquor labels. He won the complete cooperation of Banks's abandoned wife and learned a good deal about the absconder's habits from her.

When he gave his report on Wells, Fargo's Dr. Jekyll and Mr. Hyde to the firm's general manager, J. J. Valentine, the latter tightened security measures, changed the accounting system, and demanded bonds of all employees handling company money. Valentine wired New York the startling and embarrassing news of the embezzlement, ending his communication. "As usual in such cases, we have found out after he is gone that he has been leading a profligate life, maintaining a mistress as well as a wife for years past, and you will readily understand what that implies."

Some San Franciscans claimed that Banks's tapping of the till had extended over a period of fourteen years. Mum was the word with Detective Hume, but young Eric Francis recalled how Banks always collected $50 and $100 bills from him in exchange for currency in smaller denominations and then stuffed them into the tin box, which he called his "Suspense" and which was apparently regarded as his getaway and retirement fund.

JIM HUME had a hunch that Banks had escaped by sea rather than overland. He thought at first that his man might be aboard the *Star of India,* bound for Australia. But after interviewing many captains, he learned that a Mr. Scard had sailed on the *City of Papeete* for Tahiti via Australia. Scard, a supposed invalid, had been a great favorite of Captain John Berude and his crew. He had tipped each sailor when the barkentine crossed the line and, once in Tahiti, he took Captain Berude buggy riding from his rented cottage. He also let the Captain handle the safekeeping of his "savings" until he could sail for Auckland on the steamer *Janet Nicholl.* (In 1890, Robert Louis Stevenson would cruise the South Seas in the same vessel.) Berude told Hume that Banks was a nice fellow, "real nice—and he could drink wine and coffee like a gentleman"—whatever that meant.

On December 11, 1886, barely six hours before the arrival in port of the *Raiatea* with Jim Hume's photos and reward posters, Banks sailed for New Zealand after turning over to Berude the poison he had carried all the way from San Francisco—ready to use it should Hume entrap him. Handing the vial of morphine to the captain, he remarked, "I guess that I don't need this now, and you might as well put it in your medicine chest."

Hume knew that his quarry was somewhere in the South Pacific, but he did not know his exact whereabouts until someone tipped him off that a box of seeds lay on the Embarcadero awaiting transshipment to a Mr. Scard—in Rarotonga. This is the main island of the Cook Islands, an archipelago southwest of Tahiti and about 1,600 miles northeast of Auckland, New Zealand.

Records are very incomplete today, because of the wholesale destruction of business files by the 1906 earthquake and fire, but apparently Hume sent agents to Tahiti on a lumber schooner in April 1887 and thence via chartered schooner to the Cook Islands. It is believed that he sent a second, follow-up expedition, probably in the person of Auditor Edwin B. Riddell, in 1892. But he did not get Banks back, nor the money. Although under British protection, the Cook Islands group was autonomous and without an extradition treaty with the United States. Charley Banks had played his cards well; he was beyond the grasp of Wells, Fargo's feared detective.

According to one story, Banks became the husband and prince consort to two-hundred-fifty-pound Queen Makea. In another yarn, he is said to have married the chieftainess's daughter. Almost certainly he did neither, but he did well enough in his cozy hideout. Records in the National Archives of New Zealand reveal that Banks, still calling himself J. Scard, was appointed auditor and government registrar of the Cook Islands in 1891.

Rumors reached Hume that Banks was living a life of ease, with a standing order for cigars, liquors, and copies of the *Times* whenever a ship called at Rarotonga. Since the detective could neither arrest him nor persuade him to return his ill-gotten gains, he did the next best thing. Hume turned Banks's South Pacific asylum into a prison. He blanketed the South Pacific with reward posters for Banks until the latter feared to set foot in New Zealand, Australia, or anywhere else outside the Cook Islands.

At different times, Charley Banks lived on the main island of Rarotonga and on Atiu, an island 116 miles northeast of Rarotonga. But the humdrum life of the tropics began to pall.

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Like so many wanderers, Charley Banks found that the nineteenth-century South Seas was not the paradise it had been cracked up to be by eighteenth-century explorers like Captain James Cook.

After the Polynesian and European churchmen of the London Missionary Society came from Tahiti and converted the native chiefs to Christianity, they were able to run the islands to suit themselves. Their choice of regime for the simple and sensual natives was a grim Calvinistic society dominated by so-called "moral laws." When Banks reached Rarotonga he found these blue laws very much in effect. Men, even white men, were forbidden to be out of doors after 8:00 P.M. at night. If found abroad after that hour, they were forced to pay a heavy fine. According to South Seas author Beatrice Ethel Grimshaw, a Maori who walked with his *wahine* at dusk was forced to carry a lighted torch and if he let it go out, he was fined. Should he be caught weeping over the grave of a woman not related to him, he would be fined also.

Luckily for Banks, the onetime wencher and thief had so reformed himself that his teetotalism et al endeared him to the Reverend Hutchin, the local missionary. Within a short space of time, he became part of the Cook Islands establishment and society.

IF THE ISLANDS' population could be simplistically divided into liberals and conservatives, Banks was among the latter. In 1897 he was one of twenty-six signers of a "Petition for the Observance of the Proper Sunday in the Cook Islands." The onetime lecher was now solidly in opposition to the "very indifferent class of settlers . . . dissipated and fugitives from other countries" described by a resident commissioner a few years later. They indulged in drunken orgies called "bush beer parties," described by such travelers as the American, Dr. Caldwell. (The beer was a wine, of sorts, made from fermented orange juice, *faute de mieux*.) The wrangling continued along the lines of missionary vs. non-missionary Hawaii even after New Zealand annexed the islands on June 11, 1901 and replaced the British resident with its own resident commissioner.

In 1897, the *Arikis* or high chiefs of Rarotonga signed a petition for the removal of the British resident, F. J. Moss. A prominent signer of the counter-petition, supporting Moss, was J. Scard—none other than Charley Banks. The continuing battle of petitions led to an official investigation by the New Zealand government. Moss's administration was subjected to a close scrutiny in which the resident's friend—and the auditor of the islands, Banks alias Scard—came under investigation, too.

Moss explained to Sir James Prendergast, who led the inquiry, the curious fact that an embezzler from the States had been named government auditor of the islands: "I arrived here in 1890. Mr. Exham was then British Consul. In 1891 Exham pointed out Mr. Scard to me. He told me that he had been officially offered $1,000 if he would go back to San Francisco, the object being that he should give evidence against others high up in Wells, Fargo & Co., who had been speculating largely with the firm's money, and whose wrongdoings Mr. Scard, as Bookkeeper, had lent himself to conceal. Mr. Exham told me that when he offered this to Mr. Scard, the latter said 'Not for a hundred times the money; they have been my best friends.'

"Mr. Scard I afterwards saw in the confidential employ of rival traders here, keeping their books. I saw that he did not drink—a very great qualification—and I venture to say that it would have been very difficult for me to have got as competent a person not otherwise employed for £15 a year. I accept all responsibility of having recommended Mr. Scard as Auditor, and during the time he has filled that office I have heard nothing to shake my confidence in the slightest degree. . . ."

Although Consul Exham had the reputation of occasionally "drawing the long bow," his word in respect to Scard/Banks was believed, as was Moss's. Their high opinion of the Wells, Fargo thief was reinforced on October 5, 1898, by Lieutenant Colonel Gudgeon, who had replaced Moss as British resident. He reported to Lord Ranfurly, governor of New Zealand, on the need for personnel changes in the civil service of the Cook Islands: "The Maori inhabitants of the Cook Islands have more than once objected to these officers (Messrs. J. Garnier and J. Te Pou) on the grounds that they were incompetent to perform the duties of their respective offices and, for this reason, it had fallen to the lot of Mr. Scard to do their work.

"Their objection to this arrangement was not unreasonable, for Mr. Scard occupies the position of accountant to Donald and Edenborough, who are not only the Government bankers, but absolutely the only Treasury accounts that are available. He is also the Government Auditor and therefore, under the existing system, may be said to be auditor of his own accounts.

"The result of this unhappy combination of offices is that many Maoris and perhaps a few of the Europeans believe that the Government funds have been maladministered, and even misappropriated. I have no reason to suppose that this belief is justified by the facts. . . . Whatever his past may have been, [Mr. Scard] has behaved well during his residence at Rarotonga. He is simply the victim of a dangerous system of Governmental bookkeeping, wherein he has had to do the work of several departments."

For several years after Moss's replacement as resident in the Cook Islands, the *Arikis* continued to lodge complaints of mismanagement of finances against him. P. P. Webb in 1899 visited the islands to audit the governmental books and his careful examination cleared Moss (and inferentially, Charley Banks alias J. Scard). He found no trace of fraud or embezzlement in the accounts kept by ex-auditor Scard.

In May of 1900 the prime minister of New Zealand visited the island group. Premier Richard John Seddon was presented with still another petition, this one by forty "white" residents (including four Chinese) who appealed for annexation in

order that the trading community might be better protected. One of the signers was Charles W. Banks, who had abandoned his alias.

BACK IN SAN FRANCISCO, Jim Hume and the Wells, Fargo brass were unaware of the role than Banks was playing in Cook Islands politics. In fact, rumors and reports which reached the U.S. tended to be misleading, such as the story that a Captain McCoy told Hume in April of 1894. At a time when Banks was auditor and apparently prospering as a private bookkeeper to boot, McCoy reported: "From all accounts, Banks is having a hard time of it. His reputation is well-known throughout the South Seas, and he can get no position of trust. When a merchant or trader wants any work done in the clerking or accounting line, Banks gets the job. These jobs, however, are scarce and the existence the embezzler ekes out is a poor one. He is an exile from home, an outcast of society, and dead to the world."

One wonders if the resourceful Banks "planted" the story with San Francisco–bound skippers so that it would reach Jim Hume's ears, and lead him to relax his surveillance.

Apparently, Charles Wells Banks—as J. Scard—enjoyed considerable standing in the Cook Islands community as well as a comfortable, if dull, existence in exile. He died at Avarua, the little port on Rarotonga's north shore, on March 21, 1915 and was buried in the European plot of the Mission Cemetery there on the island.

According to a letter now on display in the Cook Islands Library and Museum, Banks in 1915 was anything but the figure of pity or contempt that Captain McCoy pictured for Jim Hume in 1894. Although he had suffered from painful blindness for some time, he was well attended by friends during his illness, especially by members of the Shearman family. According to Eric Francis, who managed to get word of him, he learned Braille at this time. The posted letter states, "The funeral, which took place on Monday, March 22, was very largely attended by a large number of mourners, testifying to the esteem and respect in which he was held."

Before his blindness, which he bore with great patience and resignation, Charles W. Banks passed the time by keeping a series of diaries. Some years ago, a Rarotonga writer, W. H. Percival, discovered three of them in the hands of a Maori family of Arorangi. Today, ten of Bank's years of exile—1892 and 1897–1905—are documented in his diaries, now in the museum at Rarotonga. It is hoped that the missing volumes may still be found.

These diaries in the Cook Islands Library and Museum are evidence that Banks was certainly no miserable "outcast" in terms of Cook Islands society as Captain McCoy had insisted to Hume, but that he was, indeed, a prisoner of sorts, as Hume intended him to be on his tropic isle. He found himself to be a prisoner of ennui.

The diaries are filled with the minutiae of weather conditions, shipping, and occasional visits with European friends.

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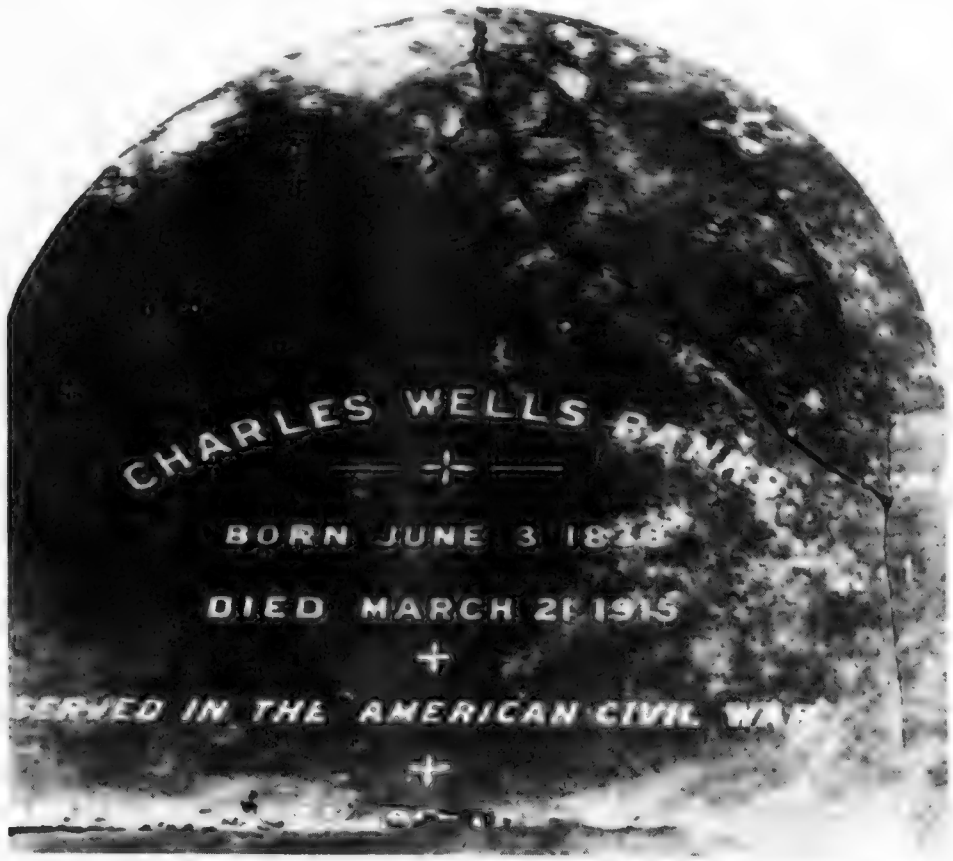

Charles W. Banks rests, finally at peace, at Avarua, Rarotonga, in the South Seas.

A PICTORIAL HISTORY OF MOUNT RAINIER NATIONAL PARK

By ARTHUR D. MARTINSON

THE STORY OF

SPECTACULAR MOUNT RAINIER and the forested area that surrounds it officially became the nation's fifth national park on March 2, 1899. Located in the Cascades of west-central Washington, the park covers an area of approximately 241,000 acres. Mount Rainier is the most prominent landmark in the Pacific Northwest, soaring nearly two miles high, a magnificent sight from the lowlands to the east and west. Trail and road systems make it possible to encircle the mountain, or approach it from any one of the four corners. Because this national park is so richly varied and so easily accessible from nearby cities, a great number of tourists (two million) visit it annually.

It is always interesting to speculate about the origins of a national park. Park movements usually involve twin objectives: the permanent preservation of an area for its own sake, and the thwarting of "special interests" that threaten to exploit its natural conditions. Behind every national park movement there are ideas, impressions, and events that suggest a subtle link to preservationist thinking. In many respects, the early explorations and ideas of tourism associated with the Mount Rainier area fall within this category, and so provide a significant insight into the origins of the movement which led to official national park status by 1899.

The first recorded discovery of Mount Rainier was made in May, 1792, by one of the world's best mariners of that time, Captain George Vancouver, who was on a voyage of discovery for the British Royal Navy. Sailing over the quiet waters of Puget Sound, he was greatly impressed by the striking natural beauty of the area and the "round snowy mountain" that loomed high along the "eastern snowy range" to the south of his observation point. This mountain he named "Mount Rainier" in honor of his friend Rear Admiral Peter Rainier. As far as we know, neither Vancouver nor any member of his crew attempted to approach Mount Rainier, or for that matter, even toyed with the idea. That job was undertaken by another Englishman forty-one years later.

As a career man for the Hudson's Bay Company, Dr. William Fraser Tolmie was going places. Some day he would hold the important rank of Chief Factor, and after that he would be promoted to the board of management. But in 1833, more than twenty years away from those bigger jobs, the young and ambitious Tolmie had just arrived at the recently built Fort Nisqually, located in the heart of the Puget Sound country. The area had changed little since Vancouver discovered it four decades before. In August of that year, Tolmie's interest in organizing a botanical excursion led to a ten-day trip to Mount Rainier, where he hoped to "gather herbs of which to make medicine." He apparently received information, perhaps from the Indians, that the Mount Rainier area offered the best chances for a successful botanical trip. While flowers and plants principally absorbed Tolmie's interest, the Indians who accompanied him took it for granted that they would enjoy a profitable hunting trip.

They followed the Puyallup River upstream, constantly winding, crossing and detouring. Finally the party worked its way into what is now known as the Carbon River region of Mount Rainier National Park. In so doing, Tolmie became the first white man on record to venture within its present boundaries.

UNDERSTANDABLY, in later years Tolmie could look back upon such a milestone with immense satisfaction. But if his Indian companions knew of this honor, they might have been amused, since it is now generally understood that Indian wanderings about the base of the mountain were customary long before the coming of the first white settlers.

The nearest known permanent villages to the park were maintained by four different Indian tribes, and they were located at an average distance of twenty miles from present park boundaries. The Yakimas had villages on the Bumping and Tieton rivers. The Taidnapams were located at the junction of the Muddy and Clear forks of the Cowlitz River. Nisqually Indians could be found at or near the present towns of Elbe and Eatonville, and the Puyallup Indians maintained traditional villages at the junction of Voight Creek and Carbon River, and at the junction of the Puyallup and Carbon rivers.

But what about the mountain itself? Did any of these Indians living within the shadow of the great mountain attempt or actually succeed in climbing to its summit? To this day, historical evidence indicates that even though the Indians wandered freely over the lower elevations, they never climbed Mount Rainier. They regarded this soaring mountain as an

View of Mount Rainier from Paradise Valley.

A MOUNTAIN

object of fear and mystery, not to be disturbed by the defiant footsteps of a climber; the only exceptions to this traditional Indian attitude are found in folklore tales.

Of great significance to the early history of Mount Rainier National Park were the Indian trails which served, however crudely, as guidelines for the first white settlers crossing the Cascades. One east-west Indian route through the mountain range would hold special importance for the Puget Sound country and Mount Rainier. This is the historic Naches Pass, located a few miles outside the present northeast boundary of the park. Through the years, the route through Naches Pass became known by many names, including "Klickitat Trail," "Naches Pass of Many Water Crossings," and the "North Branch of the Oregon Trail." It was the first and, for a time, the only feasible pioneer access to the Puget Sound area north of the Columbia River.

IN 1841 THE FIRST recorded crossing of Naches Pass by the Wilkes Expedition proved to be a challenge of considerable magnitude. And interestingly enough, the challenge was met by the United States Navy! Early that year Commander Charles Wilkes, leading a small squadron of ships, entered Puget Sound and set up headquarters at Fort Nisqually. Wilkes chose Lt. Robert E. Johnson as leader of the expedition designed to carry out scientific and geographical studies. Johnson, in turn, proceeded to organize the outfitting of a group that eventually made a one-thousand-mile, round-trip

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trek between Fort Nisqually and Fort Colville in eastern Washington.

One major result of this party's effort was the first known study of the elevation of Mount Rainier. Johnson commented: "Mount Rainier, from the top, bore south-southwest, apparently not more than ten miles distant. A profile of the mountain indicates that it has a terminal crater, as well as some on its flanks." This was the beginning of something more than just a curious interest in "The Mountain." In later years, scientific study of Mount Rainier would blossom into a field of its own.

The next significant crossing of the Cascades came in 1853. In that year the first wagon train to cross the Cascades north of the Columbia River included among its leaders an intrepid pioneer who was destined to leave an indelible mark on the early history of Mount Rainier National Park. On March 6, 1853, James Longmire (1820–97), with his family and associates, left Shawnee Prairie, Indiana, and began a two-thousand mile journey to Puget Sound. Seven months after leaving Indiana, these hardy pioneers finally reached the Nisqually Plains near the present city of Tacoma. While others took up land claims along the Puget Sound, James Longmire crossed the Nisqually River and settled on Yelm Prairie, from which he would make many round trips to Mount Rainier.

CURIOUSLY, another person who crossed Naches Pass that same summer of 1853 was also destined to influence significantly the early history of Mount Rainier. Theodore Winthrop, a descendant of John Winthrop of Puritan fame, left behind a remarkable autobiography, *The Canoe and the Saddle*, which refers to Mount Rainier as "Mount Tacoma." As far as we know, this is the first reference to Rainier by that name in print. Winthrop claimed that "Mount Tacoma" is what the local Indians always called the mountain, and that the name "Rainier" was a ". . . stupid nomenclature perpetuating the name of somebody or nobody." Little did he know that years later his book would be an object of heated concern in the prolonged and bitter controversy between Tacoma and Seattle over the name of the mountain.

Longmire's name was never to be linked to anything so controversial as the name dispute that erupted in the 1880s. Besides, by that time James Longmire and his family were far more interested in keeping tourists happy at the Longmire Springs Hotel, no matter what their patrons preferred to call the mountain.

All this, however, was still in the future when Longmire staked out his claim to 640 acres on the Yelm Prairie. The year was 1853, and it had only been seven years since the United States had squeezed the British out of the Oregon Country below the 49th parallel. And yet, by the time James Longmire prepared for his first winter in the Pacific Northwest, Washington Territory (carved out of the older Oregon Territory) was already several months old, settlers were drifting into the Puget Sound country in ever-increasing numbers, and talk of improving Naches Pass was a familiar topic of discussion among the new residents west of the Cascades.

Although the pass *was* improved and used for many years after 1853, James Longmire and William Packwood decided in 1854 to look for a better route through the Cascades, possibly south of Mount Rainier. Their decision to follow the Nisqually River upstream on the southwest side of the mountain

Bailey Willis
From a photograph taken in 1886

All these men played important roles in the exploration and development of Mount Rainier. Left to right: James Longmire, Philomen Van Trump, Dr. William Fraser Tolmie, Gen. Hazard Stevens, Bailey Willis, Samuel Franklin Emmons, and Lt. A. V. Kautz (at left), who in 1857 made the first recorded attempt to scale the mountain.

was significant, for once again, more than twenty years after Tolmie's northwest approach, the explorer's curiosity drew the white man close to the massive peak. They proceeded up the Nisqually River to Bear Prairie, just outside the present southwest boundary of the park. From that point Longmire and Packwood followed Skate Creek to its junction with the Cowlitz River on the southeast side of the park.

In so doing, they were probably the first white men to tramp the Big Bottom country. Their efforts led to the discovery of Cowlitz Pass (Packwood is recognized as its discoverer), though it never developed into a main route of travel, partly due to the outbreak of Indian wars in Washington Territory during the 1850s, and the improvement of Naches Pass. Perhaps a more important reason was the growing trend of incoming settlers to reach the Puget Sound area via Portland.

For James Longmire, the trip with Packwood in 1854 marked only the beginning of exploring the Mount Rainier region. It is possible that he thought of blazing a trail from his Yelm homestead to Bear Prairie as early as 1855. But the Pacific Northwest Indians were on the rampage that year, and Longmire was pressed into service by the territorial legislature to help pacify the Indians west of the Cascades. Also, his Yelm property required a major share of his time, at least for the first few years.

The lure of the mountain, however, increasingly played upon his imagination, and he took a long step toward satisfying this curiosity when he finally blazed a trail to Bear Prairie in 1861. In the years that followed, this trail was frequently used by tourists and climbers traveling to the mountain.

Certainly James Longmire's curiosity about the mountain

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had been stimulated by the daring attempt of Lt. A. V. Kautz to conquer the heights of Rainier during the summer of 1857. Kautz, a United States Army officer, did not succeed, but his trip from Fort Steilacoom to approximately the fourteen-thousand-foot mark ranks as the first attempt on record to scale "The Mountain."

Although Kautz came close to conquering Mount Rainier, he apparently made no plans for a second attempt. Once was enough. Furthermore, he thought it unlikely than anyone else would take up the challenge in the immediate future. But he believed the day would come when many would try: "When the locomotive is heard in that region some day, when American enterprise has established an ice-cream saloon at the foot of the glacier, and sherry-cobblers may be had at twenty-five cents half-way up to the top of the mountain, attempts to ascend that magnificent snow-peak will be quite different. But many a long year will pass away before roads are sufficiently good to induce anyone to do what we did in . . . 1857."

THE NEXT ATTEMPT came sooner than Kautz expected, but his prediction that the future would bring many attempts to ascend the great mountain proved accurate.

James Longmire could agree with Kautz that Mount Rainier presented a magnificent challenge, but he preferred exploring around it, not on it. Longmire was simply not interested in becoming the first man on record to stand on Rainier's highest point. Yet, as the years rolled by, his explorations between Yelm Prairie and the mountain earned him a reputation as an expert on the area. Early climbers anxiously sought his advice and, if they were lucky, could get Longmire himself to guide them to the mountain's base. It was not surprising to local settlers that this knowledgeable frontiersman played a significant role in the first successful ascents of Rainier.

Both General Hazard Stevens and Philomen Van Trump were counting on James Longmire's help when they left Olympia on an August afternoon in 1870, en route to the Yelm homestead. Their plans had been laid very carefully, and their goal was nothing less than the full ascent of the spectacular mountain.

Stevens, son of Isaac Stevens, the first governor of Washington Territory, and Van Trump, secretary to the territorial governor serving at the time, Marshall Moore, had learned earlier that the south and southwest approaches to the mountain seemed the most favorable. Upon arriving at the Longmire homestead, however, Longmire told them that he didn't want the job of leading them to the mountain, principally because of pressing business at home. Only after considerable persuasion did he finally agree that he would lead them as far as Bear Prairie.

A third person, Edward T. Coleman, joined Stevens and Van Trump, and after the supplies were packed on two mules and a pack horse, the trio began the long journey. As expected, the trail proved extremely difficult to follow, aggravated by the confusing tracks left by wandering Indians in search of berries. Even with James Longmire leading, they missed the "trail" many times and lost time in retracing their steps to find the right direction. After five days of the incessant toil of climbing over fallen logs and encountering thick brush, the party reached Bear Prairie and pitched camp. Then, as if it were an ominous sign not to continue, the tired journeyers barely escaped injury when a huge tree came crashing down over their camp in the middle of the night.

James Longmire built his hotel at the base of Mount Rainier in a meadow full of bubbling mineral springs. Tourists enjoyed easy access to the mountain from this point.

These mountaineers, however, were not the type to be discouraged easily. Ahead of them lay the most difficult part of the journey, and they knew that disappointments and fatigue were just part of the game. From their camp on Bear Prairie, Longmire and Stevens traveled eastward through the wilderness until they reached Cowlitz River. At that point Longmire persuaded Sluiskin, a Yakima Indian, to come to Bear Prairie the next day and lead the climbers to the very base of Mount Rainier. Keeping his word, Sluiskin arrived at Bear Prairie about noon and described the route he intended to follow. Longmire, helpful to the last moment, wished the group luck and began the long, homeward trek.

From Bear Prairie Sluiskin led Stevens, Van Trump, and Coleman toward the majestic mountain, which they referred to as "Takhoma." The long, circuitous hike over the Tatoosh Range turned out to be an ordeal, so much so that Coleman gave up and returned to camp. The others pushed on, and followed the Indian guide who led them up a ridge (Mazama Ridge) to a point near an unnamed waterfall on the headwall of what became known as Paradise Valley.

That was the end of the trail for Sluiskin, and he did his utmost to dissuade the white men from attempting to undertake what he believed a very foolish and fateful venture. Stevens reported that Sluiskin sternly warned them that destruction surely awaited them if they continued on, and that "Takhoma" was an enchanted mountain, inhabited by an evil spirit who dwelt in a fiery lake on its summit. No human being could ascend it or even attempt its ascent, and survive.

Sluiskin's words were of no avail, and so he did the only thing he could do. He told Stevens and Van Trump that he would wait three days for their return, and if the climbers failed to appear, he would go to Olympia to inform their friends of their deaths. So that their friends might believe his story, Sluiskin pleaded for the two climbers to give him a written note explaining the situation. In memory of this Indian, the climbers named the waterfall "Sluiskin Falls."

After leaving Sluiskin and their main camp, Stevens and Van Trump struggled up the southwest slope of the mountain. The climbing became especially difficult above ten thousand feet, where they encountered dangerous snow and ice conditions. Moreover, as the climbers neared the summit they approached complete exhaustion. No doubt they asked themselves many times whether it was really worth the effort. But the view was magnificent, the solitude awesome, and it seemed as if they had climbed into another world.

Finally they reached the summit, a grueling and strenuous ordeal. After spending some time resting and enjoying the immense satisfaction that comes with conquering a mountain of Rainier's stature, the two climbers successfully made the descent and returned to Olympia where they were given a rousing welcome. Their round-trip journey lasted seventeen days and carried them 240 miles. They had accomplished what many thought to be impossible, although it would not be long before "The Mountain" would be conquered many times.

LATE IN THAT SAME summer of 1870, James Longmire once again served as a guide, this time for S. F. Emmons and A. D. Wilson, who successfully made the second ascent of Mount Rainier. Emmons was already well on his way to becoming a noted expert in geological studies, and he and Wilson had come to the mountain to carry out extensive surveys of the peak itself and the glaciers that surround it. Longmire stayed with them about twelve days, helping in preparations, before leaving the climbers on their own. After considerable delay and difficulty, they reached the top via a variation of the Stevens–Van Trump route.

Thirteen years elapsed before the third successful ascent of Rainier was accomplished. Van Trump, back for a second time and accompanied by George Bayley, persuaded James Longmire to join them in going all the way to the top of the mountain.

The Van Trump–Bayley–Longmire climbing party reached the crest of Rainier on August 17, 1883. Fatigue and the lateness of the hour helped them decide that an overnight stay on top would be the wisest course to follow. Unfortunately, the night turned out to be anything but restful. Steam vents in the crater provided warmth, but in the process their clothes became wet and stiff from the freezing temperatures when not exposed directly to the warm steam. In the morning they negotiated the descent without mishap. When the three climbers returned to their camping spot on the Nisqually River, James Longmire found that the horses had wandered away. He found them nearby in a meadow, which contained many bubbling mineral springs. The discovery of these springs struck Longmire as a great opportunity to lay the foundations for a tourist resort in the midst of a mountain wilderness.

Following up his discovery, Longmire filed a mineral claim

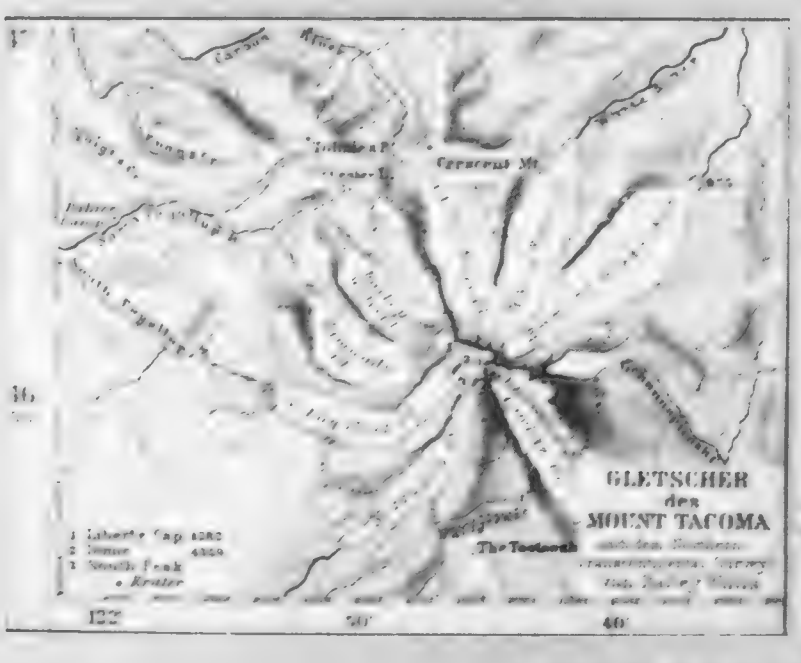
MOUNT RAINIER NATIONAL PARK

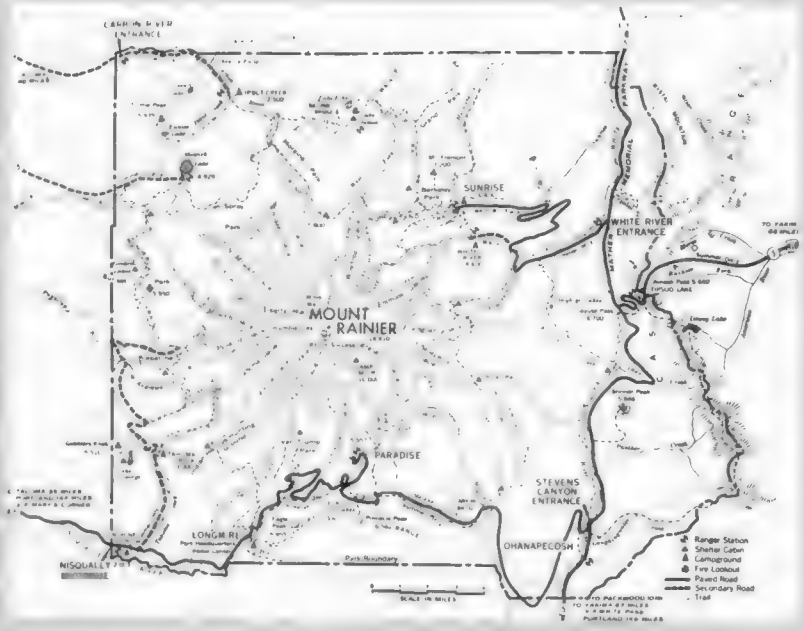
A 1912 photo of Van Trump, at right, and Jules Tamphler, his guide.

XUM

ED COOPER

Awesome and rugged Mount Rainier stands as a challenge to climbers.





At left is the first map drawn of Mount Rainier, by Bailey Willis in 1883, and published in Munich, Germany, in 1886. At right is a contemporary rendering of the area.

of approximately twenty acres under the provisions of the Federal Placer Act. Then, he built a trail northeasterly from Bear Prairie to his recently discovered springs, which became known as Longmire Springs.

And despite the overriding presence of wilderness life, another significant milestone in the early history of the park had been reached. Prior to this time, human interest and activity in the immediate Mount Rainier area were almost entirely confined to explorations and guide trips commencing from small settlements many miles distant from the mountain. Now, in 1883, the discovery of mineral springs at the base of Rainier was the beginning of the first permanent settlement within the present park boundaries. It was equally significant that James Longmire planned a tourist resort at Longmire Springs, for inevitably such an enterprise would attract many people to the area.

While Longmire worked at developing Longmire Springs, the northwest side of the mountain—known as the Carbon River area—also loomed as a potentially great tourist attraction. The Carbon River country had been quiet since Tolmie made his historic trek in 1833, but railroad and mining projects broke that solitude by the 1870s. Twenty years after the Longmire train crossed Naches Pass, and only three years after Stevens and Van Trump conquered Mount Rainier for the first time, the Northern Pacific Railway reached the small settlement of Tacoma with tracks laid northward from the Columbia River. Tacoma had already been marked by the railway officials as the western terminus of their transcontinental line, eventually completed by 1883.

More important, the coming of the railroad to the Pacific Northwest was the beginning of a remarkable transition for this region. No longer would population remain sparse, economic growth slow, and communications primitive. And significantly, the laying of steel rails in the Puget Sound area would also influence the development of the Mount Rainier region. Carbon River was the first target.

However, until 1881, the Carbon River country which lies within the present boundaries of the park remained practically unexplored. Between 1881 and 1883, an assistant geologist for the Northern Transcontinental Survey began the practical work of exploring and surveying this portion which he referred to as that "awful solitude of wilderness." Bailey Willis opened a horse trail from Wilkeson to the Carbon River in 1881, crossing the rapid glacier stream about sixteen miles below the glacier's terminus. During the fall of 1882, he extended the trail southward to the Mowich River.

Near that river, at a point approximately four miles west of the present park boundary, Willis constructed four buildings which he called "Palace Camp," and which a Tacoma newspaper aptly referred to as "The Lone Lodge in the Wilderness." This trail to Palace Camp became known as the Bailey Willis or the Grindstone Trail. A spur trail was built a short time later into the high country, and during the 1880s and 1890s hundreds of tourists embarking from Tacoma and Wilkeson traveled over this trail to see mountain glaciers at their best.

Willis was so enthusiastic about the Carbon River area that he aroused the interest of Thomas F. Oakes, vice president of the Northern Pacific Railway. The latter decided to visit the area to verify Willis's glowing account and to assess the value of the region for attracting tourists. In June of 1883, a contingent whose members included Oakes, Senator George Edmonds of Vermont, and J. M. Buckley, assistant general manager of the Northern Pacific Railway in charge of western divisions, visited this rugged but beautiful mountainous part of Rainier.

Whatever doubts Oakes may have had regarding Willis's evaluation of the Carbon River country, they were quickly dispelled. He returned from the trip thoroughly convinced that Willis knew what he was talking about, and that the area's tourist potential was good indeed. And he left no doubt as to what part the Northern Pacific Railway would play in promoting this promising tourist mecca: "A very important part of the business of a railroad company is to provide incentives for travel. The result is desired passenger traffic. The case of the great National Yellowstone Park is an example. The Northern Pacific Railroad Company has advertised it far and wide at no little expense."

Thus, the same would be done for Mount Rainier, or as the railroad called it then, "Mount Tacoma."

Aside from promising publicity of the Carbon River country, Oakes further predicted that good roads and adequate accommodations would be provided along the route to Wilkeson. Finally, he said something that warmed the hearts of Tacomans. He marked Tacoma as the only natural and suitable point of departure for parties beginning their trips to the mountain.

In the years that followed, the truth of this latter statement was proven in more ways than one. That a far greater number of Mount Rainier tourists eventually preferred Longmire Springs and Paradise Valley to Carbon River did not lessen the importance of the northwest side. Public interest in "The Mountain" greatly accelerated after 1883, and for many it was synonymous with Carbon River's rugged wilderness.

By 1883, the era of discovery and exploration of Mount Rainier had passed, but by no means did discoveries and explorations cease. The entire east side of the mountain was still largely unexplored, and climbers were just beginning to find new routes up to the summit. But the discovery of Longmire Springs and the opening of the Carbon River country ushered in a new phase. Now the tourists would come. Now the publicity of Mount Rainier would leap forward. Now the momentum would begin that would help lead to the establishment of Mount Rainier National Park in 1899.

Arthur D. Martinson *is assistant professor of history at Pacific Lutheran University in Tacoma, Washington.*

XUM

A WESTERN PHENOMENON

THE ORIGIN AND DEVELOPMENT OF WATERSHED RESEARCH: MANTI, UTAH, 1889

BY ALBERT ANTREI

"RANGE BEHAVIOR" is not a reference to the mores of cowboys, but a term that suggests the great struggle for existence that is silently enacted along the tops of mountains and plateaus of the West. The grasses, shrubs, and trees, which make up those delicately-balanced natural units called watersheds, are in a permanent conflict to survive not only the rigors of a semiarid and sometimes arid environment but the impact of human use, which historically has assumed the level of assault. This ecological melodrama remains generally unknown except to those trained to see it; it becomes dismally apparent to everyone concerned, however, whenever a watershed is so mangled by human misuse that it ceases to perform its function of assimilating and distributing water in natural patterns. The result is flooding—rock and mud floods that are entirely capable of wiping out farms, towns, and any odd number of man's more ambitious efforts and, occasionally, man himself.

We know all this now, and have accumulated information and techniques for the intelligent management of watershed lands, management that when conscientiously applied can minimize the more disastrous consequences of human use. Yet less than a century ago, we knew next to nothing of this; as late as 1900 there were few trained foresters in the United States, none of them in the West, and nothing at all by way of a science-based watershed management policy on a national scale. It was not until 1911 that the first range management research station in the country was established, and then only as a long-delayed response, as with so many of man's more enlightened projects, to disaster—a series of ruinous floods that for a time threatened to make the little town of Manti, Utah, uninhabitable.

Manti was in a singularly vulnerable position. Seated some one hundred miles south of Salt Lake City, it clustered at the foot of Manti Canyon, a slot in the earth which cut up to the mountains and tablelands of the Wasatch Plateau, forming a natural channel for the annual spring melt. The town had experienced occasional flooding since its founding in 1849, but in 1889 it suffered its first encounter with the profoundly damaging rock and mud variety, as the waters of Manti Canyon scoured its channel with all the junk of nature and dumped the whole mess in Manti's lap. It took weeks of man-killing effort to dig the town out, and for the first time the citizens of Manti began to look upon their mountains as a menace. The jaundiced view was not unjustified: between 1889 and 1903, the town endured floods as an almost annual event; they came with any storm of normal intensity, and each year they came from higher up and farther away. They became harder and harder to clean up. Lloyd Tuttle, a long-time resident who was of high school age in Manti at the time, reported that he and other young men sometimes worked for as long as six weeks with as many as twenty-four teams of horses to clear debris out of the Manti Creek channel. Abandonment of the town was not impossible.

THE FACT WHICH the good citizens of Manti had to face was that they were the architects of their own disaster. Beginning in about 1870, Sanpete County, of which Manti was the seat, had seen some modest fortunes made in the production, buying, and selling of both wool and lambs, and by the time of the first great flood in 1889, the industry was shipping thousands of tons of wool annually to New England. Possibly only the family farm in those days provided more employment in the county than sheep and wool production. Estimates vary as to the number of sheep which were sent to graze on the top of the Wasatch Plateau every spring and summer; over a hundred thousand owned in the Manti area alone grazed the head of Manti Canyon in 1900, and there may have been as many as eight hundred thousand scattered over the whole plateau.

Whatever the precise number, it was too many for the land to support. By early May nearly all herds were "on top." Many of them lambed there, and nearly all of them milled around the shearing corrals for miles and for weeks, awaiting their turns. Wool was hauled to Manti for baling, as Manti was then a railhead. For the remainder of the summer, herd

after herd trailed across the top of the plateau along both sides of what is now called the Skyline Drive. As the old-timers of Manti put it, "You could tell the number of herds on the forest by counting the dust clouds." At summer's end, the herds reached the northern edge of the plateau, from which the range-fed lambs were driven to the railroad at Colton for consignment to market, leaving the mutilated top of the Wasatch Plateau to settle its dust under deep snow.

A generation of such treatment had practically denuded the plateau, making it surely one of the most thoroughly misused watersheds in the country, if not the world. The consequences to Manti were predictable, and it was out of just such perennial flood crises that the first range watershed experiment station in the United States rose—something like Phoenix out of the muck.

WATERSHED RESEARCH, of course, did not begin with the first flood, nor even with the tenth. The first range watershed experiment station had to await the establishment of the Manti National Forest, and the latter's beginnings lie in the phlegmatic minutes of the meetings of the Manti City Council of 1890, where the desirability of a Manti forest reserve was first discussed. These were democratic moves in common council, with all the measured slowness of a democracy, with all the hesitation waltzes and patient heel-cooling, which characterize step-taking by common men practicing the fine art of rule by law. It was table-and-wait, write-a-letter-and-wait, pass-a-resolution-and-wait.

Between 1889 and 1903, Manti battled its floods with ditchdigging, channel-clearing, reservoir construction, bridge repairing, and damage-paying for everything from irrigation ditches to pianos. There was precious little time for whittling. Spring high water and midsummer mountain storms not only went under the bridge with history, but over it and around it, and digging-out remained an annual chore, to look forward to along with the late blooms of spring. Fourteen years is a long time to spend at hard labor.

Still, it might have been an even longer wait had not Manti's needs coincided with a growing national awareness of the utility of conservation, one of the first reflections of which was a recognition that the public domain, including forest and grazing lands, needed to be put under some kind of regulatory supervision. Under the artful and diligent prodding of Carl Schurz, secretary of the interior during the administration of President Rutherford B. Hayes (1877–81) and later editor of the New York *Evening Post*, this concept was officially articulated in the Forest Reserve Act. Under the provisions of this act, some 130 million acres of land were removed from the unregulated hands of timber and grazing interests during the thirty-two years between the administration of Hayes and that of Theodore Roosevelt.

These were closed lands, "locked up" to prevent private use (not dissimilar to today's Wilderness System), and the

LLOYD TUTTLE

For a good many years this was almost an annual occurrence in Manti, Utah, situated on an alluvial slope at the mouth of Manti Canyon.

LLOYD TUTTLE

Before and after. Main Street in Manti about 1902 (above), and the same spot in 1968 after runoff from the high slopes was controlled (below).

ALBERT ANTREI

XUM

Department of the Interior came under heavy fire during and after Schurz's reign from various members of Congress, including the old fire-eater, James G. Blaine of Maine, who considered the whole idea "un-American and outrageous" and Schurz himself a "Prussian oppressor of honest enterprisers." The act was an idea whose time had come, however, and it survived even an attempt to repeal it by Congress in 1891—saved by presidential veto.

Manti's turn came in 1903. In 1901, L. R. Anderson had been elected mayor of the town on a "no more floods" basis. Although a partner in the Central Utah Wool Company and holder of extensive sheep-ranching interests south of Manti, Anderson knew that the future of the town depended upon controlling its annual flood problem. In 1902, he laid a request for state aid for immediate flood control on the desk of Utah's governor, Heber Wells, and Wells promptly appointed him to the State Conservation Commission. With this appointment as a lever, Anderson determinedly lobbied for the protection of the Wasatch Plateau—and consequently for Manti itself.

His efforts were justified on May 29, 1903, when President Theodore Roosevelt decreed the creation of the Manti Forest Reserve. The action mapped out the entire watershed, from Spanish Fork Canyon on the north to Salina Canyon on the south, with a length of about seventy-five miles and a width of about forty. A forest supervisor was appointed on July 24, along with three rangers, and the government immediately curtailed all grazing on the watershed, allowing it to assume the long process of natural repair.

Anderson's mission was accomplished, but the job was not yet completed as far as the new reserve was concerned. Lockup and regulation were certainly necessary, but if the region's principal industry were to survive the land would have to be used again—this time under intelligent management. And management could come only after the necessary knowledge and techniques had been learned through experimentation and intensive study, which would take another eight years.

CLAIRE ANDERSON

The Central Utah Wool Company, about 1900. The buying and selling of wool was an important business in Manti at the turn of the century.

LLOYD TUTTLE

In this early photo, the flood waters are receding but the damage is done (above). Below, near Swasey Creek, the north slope gives way.

U.S. FOREST SERVICE

In 1905 the National Forest Service was created under the aegis of the Department of Agriculture and the various reserved lands, including Manti, were placed under its jurisdiction. The ardent utilitarian conservationist, Gifford Pinchot, was made the service's first chief. Pinchot was a disciple of Bernhard Fernow, a German-born, German-trained professional who for more than a decade had been the closest thing to a trained forester this country had known. It was he who had first articulated what came to be known as the "multiple-use" concept of managing wild lands, a concept which held that public lands be put to carefully-controlled uses compatible both with one another and the integrity of the land itself, whether those uses be mining, grazing, lumbering, or recreation. Under Pinchot, the idea

ALMA CARLISLE

This photo taken in the 1950s shows the Manti Canyon watershed, located in the Manti National Forest in central Utah.

U.S. FOREST SERVICE

The headquarters of the Great Basin branch station, built by Dr. Sampson in 1913 (above). Below stands the savior of the valley: grass.

U.S. FOREST SERVICE

was given its first faltering steps toward official policy. In its spirit the Office of Grazing Studies was set up in 1910 in the Forest Service's offices in Washington, D. C., and the study of western National Forest range plants, growth requirements, and distribution were placed under the supervision of William A. Dayton in 1911.

It was in the summer of 1911 that Regional Forester A. E. Sherman, his assistant Homer Fenn, and two range specialists rolled into Ephraim, Utah, on the Wasatch Plateau. "They came into Ephraim," former Wasatch National Forest Supervisor A. W. Jensen wrote in 1953, "to select a possible site for an experiment station. . . . We got in a buggy and went up Fairview Canyon [about twenty miles north of Ephraim] and looked over what is now [1953] . . . the Gooseberry Ranger Station site. We looked over the country because Mr. Young, an engineer for the reclamation bureau, had built a sort of mansion he lived in and I thought we could have this for our station headquarters, but others were not in agreement. We then went up Ephraim Canyon to what is now called Bluebell Flat. They looked that over, but didn't want it. We looked up the canyon a little further. . . . There was only a very steep road at that time. We turned back and somehow turned off the road where the station is now. They were impressed somehow with this site. . . . Homer Fenn said, 'This is the place.' " (A time-honored cliché in Utah!)

R. V. R. Reynolds, one of the range specialists, went over the Wasatch Plateau in 1911 with a fine-toothed comb and found nothing but dandruff. "Between 1888 and 1905," he wrote later, "the Wasatch . . . from Thistle to Salina was a vast dustbed, grazed, trampled, and burned to the utmost . . . timber reduced, brush thinned, weeds and grass cropped to the roots, and . . . sod broken and worn. The basins at the head(s) of canyons suffered most . . . because they contained best feed for sheep . . . less broken topography, and [were] more easily accessible."

That was probably the first range survey in American history and, although it was more literary than scientific, it was right to the point.

THE STATION'S first director was an alumnus of the University of Nebraska. His name was Arthur W. Sampson, and he ascended Ephraim Canyon in 1912 to an old cattle saltground that became station headquarters. The first station personnel were ecologists and silviculturists, and they included William R. Chapline, Jr., Richard O. Cromwell, Paul Roberts, E. R. Hodson, and F. T. McLean. There were no station buildings, naturally, so Dr. Sampson and his associates camped all summer, or until sometime in October.

About five miles by road and about two thousand feet above headquarters, just below "Skyline," Dr. Sampson located the two most famous erosion area study plots in the world. He called them simply Area A and Area B, and because of the altitude the substation there was referred to as

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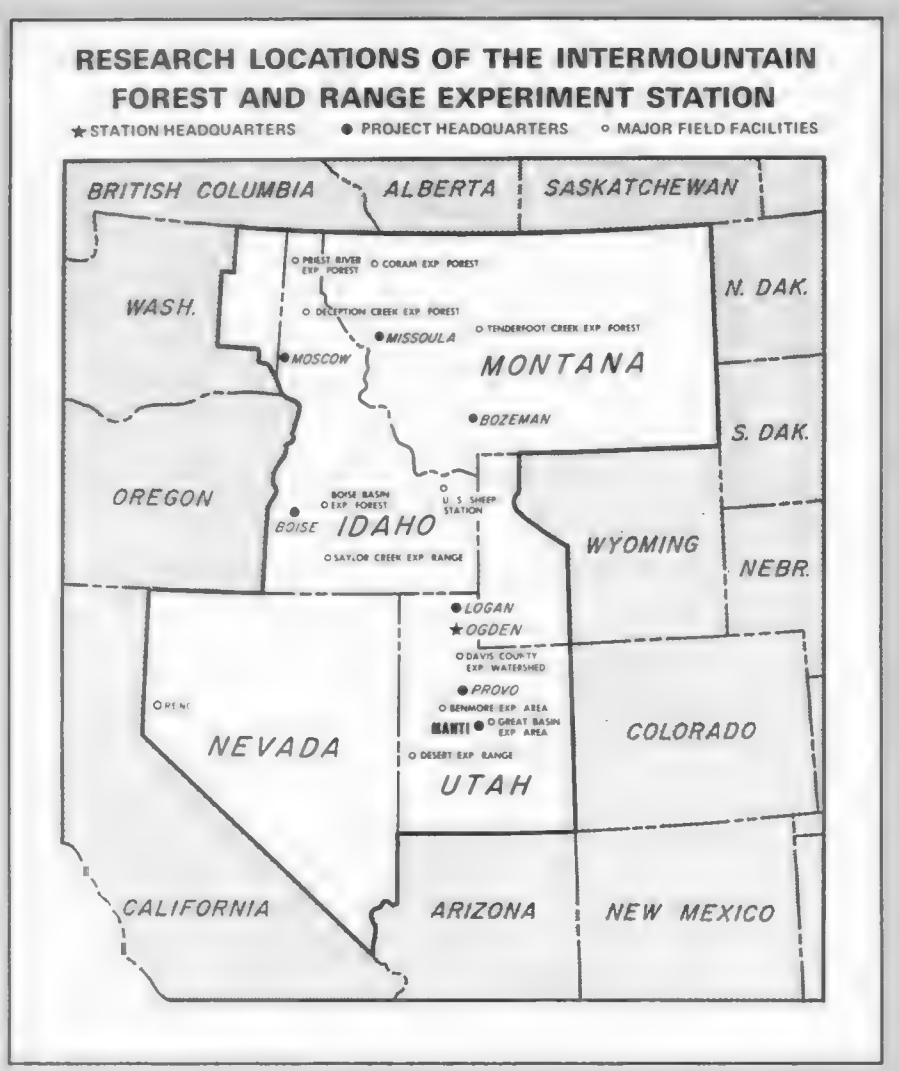

This U.S. Forest Service map indicates locations of the range experiment stations in the West, in addition to that of Manti in the central Utah area.

Alpine. Although it seems clear today that vegetative density is a great influence on soil erosion control, this was not generally understood in Dr. Sampson's day. It took years of carefully planned and executed investigations on Areas A and B to establish factual evidence of the relationships between vegetative cover, degree of slope, season of year, and precipitation amounts. From time to time, in order to hasten research and for other reasons, "rain" was artificially produced by a "rainmaker"—a sprinkler arrangement.

It took years to fully establish and protect areas for adequate study, but the overall experimental designs were not drawn up by a careless, impatient man. A note by Dr. Sampson in his official diary for the summer of 1907 will suffice to make the point: "There are 91,200 seeds in one *Erodium cicutarium*." Who will doubt it?

For a long time Dr. Sampson was also charged with all of the administrative detail. He complained about this as early as 1913. He had just supervised the construction of five buildings and a fence around the grounds and pasture. He was in charge of workmen, their foremen, and five technical field workers. "It is far removed from economy," Dr. Sampson noted in his annual report for 1913, "to have a man specially trained in investigative work laboriously spear out accounts, correspondence, and innumerable reports on the typewriter with his two fingers."

Nevertheless, between 1912 and 1922, Dr. Sampson's two-fingered typewriter turned out reports and articles of highly significant content for the pages of newspapers, the *Journal of Agricultural Research, Journal of Forestry, University of Nebraska Forestry Club Annals, Proceedings of the Society of American Foresters,* several *Bulletins* of the Department of Agriculture, and the *National Woolgrower.*

Field work in the early days of the experiment station in the Great Basin was not always accomplished in dignity and security. From the very first, local stockmen and other residents in the Sanpete Valley had some problems adjusting to scientific field techniques. They found it difficult to accept able-bodied young men sitting in one place for hours, or aimlessly walking around in their mountains for all that easy government pay (and when a meter-quadrat technician added an umbrella for protection against the brutal, high-altitude Utah sun, it flabbergasted them). One technician from the East, "counting grass" (as the local residents called it) at the head of Seeley Creek was alarmed once to have bullets splattering all around him and his little quadrat. At first he thought it was raining, but blue skies and other evidence convinced him otherwise. Leaving his work abruptly, he took off down the road with high-calibre ammunition popping the dust behind him. This young man was a college sprinter, and as one of the jokers later explained: "We jist wanted to see how fast he *could* run! He kin *go*!" Most citizens, however, were content to call the denizens of the Station at the foot of the Haystack Mountain, "Grass-Counters," sometimes in jest and sometimes in contempt.

When Dr. Sampson became associate professor of forestry at the University of California in 1922, he wrote textbooks based largely upon his experiences in Utah, and he continued his basic research as plant ecologist with the California Experiment Station. Because of several textbooks he wrote, nearly every forestry student west of Ames, Iowa, became familiar with Ephraim Canyon and the Manti National Forest.

Dr. Sampson's role in the establishment of range research in the United States (and perhaps in the world) is that of Founding Father. The present project leader at the Great Basin Experimental Range (Dr. Sampson's Utah Experiment Station), A. Perry Plummer, calls Dr. Sampson the father of the science of range management. He not only raised the first buildings at headquarters, but he established the majority of the research plots and areas for future research in ecology, erosion, and climatology. Just as basically, he derived certain principles of range management that are practiced in large part today by government land managers and by private livestockmen in this and other countries. And it was Sampson's work which provided the first clue to an understanding of the Wasatch Plateau's dismal fate.

SINCE THE CAUSE of Manti's floods was the annihilation of the virgin plant climax at the tops of Manti Canyon, the most urgent question became "What was the dominant vegetative type or types on the Wasatch Plateau destroyed between 1870 and 1900 that resulted in such a total disbalance of nature?" The answer to this question was argued in conferences and had been the object of calm reflection in the shade of many a lonesome pine. To have flunked the answer would have handicapped, or even disqualified, every forest and range research project conceivable. No early traveler's journal told. No old-timer remembered. No Indian had ever observed. In short, before 1870 there had been a "balance," but its character was known only to God, who maintained an omniscient silence about it.

It was Lincoln Ellison who gave the most definitive answer to the question. Based upon Sampson's early investigations, upon an extensive bibliography on many related subjects, and upon his own observations, Ellison prepared his doctoral dissertation on the subject in 1954. His findings on "The Subalpine Vegetation of the Wasatch Plateau, Utah" were published in the *Ecological Monographs*.

Ellison's hikes across mountain tops and flats in the late '40s and early '50s produced the best available notes on the probable nature of that mysterious, vanished plant-community life that had rendered to the Wasatch Plateau its life aspects before 1870. His conclusions took issue with Sampson on the true nature of that pristine botany. Dr. Sampson had decided that the ultimate "climax" was a forest of spruce, but Ellison showed that this was only true on the north exposures of steep slopes. On the warmer, drier sites, which seem to be more abundant, Ellison concluded that this was far from the truth, contending that for most of the plateau the climax had been a mixed community dominated by forbs (broadleaved, herbaceous plants). Sampson had also thought that the wheatgrasses formed a developmental step, or subclimax, toward the spruce forest, but Ellison proceeded to demonstrate that grass had seldom provided more than 20 percent of the virgin climax.

Sheep overgrazing, concluded Ellison, had destroyed a mesophytic environment (a moderately moist one) and created one more xeric (desert-like) which, due to a lack of organic residue on the ground, could not sponge-up rainfall and snow runoff in the spring.

MENTION MUST BE MADE of another contribution of range investigators at the Great Basin. It is not enough to understand the macroscopic factors of ecological succession of plant species under human duress. A certain amount of microscopic information is needed about the individual plant organism. Communities of plants are, after all, composed of individuals, and it is quite necessary to know something about the physiological responses of the plant as an individual. Therefore, among the contributions to biological science has been the study of plant capability to resist cropping by animals.

Since plants draw their energy for growth and other functions from their carbohydrate content, studies on seasonal changes and abundance of carbohydrates were considered important in the determination of the best season for revegetation and to recognize physiological symptoms of overuse. These studies, begun at the Utah Experiment Station, have

Continued on page 59

XUM

A Matter of Opinion

On the Trail of the Grizzly: In Reply

In the November, 1970, issue of THE AMERICAN WEST, *we started a series of articles on The Last Frontier, by Sam Wright. The first, "On the Trail of the Grizzly," evoked considerable reader reaction. Two letters, one pro and one con, are published herewith as "A Matter of Opinion."*

TO THE EDITOR:

As a student of western history and as a man who has lived in the wilderness, I wish to express my concern over the article by Sam Wright published in the November, 1970, issue. I do not wish to minimize the significance of Mr. Wright's removal to the wilderness. For this I admire him. However, he is clearly not so isolated that he must, as he asserts, depend on bear meat and fat for his very survival.

If the grizzly pictured is the same one as referred to in the article, Mr. Wright did not intend to let the meat hang and freeze for winter use. The season is obviously not nearly far enough advanced to accomplish this hard freezing. The meat would spoil in three or four days.

I worked three seasons as a camp cook and skinner for one of the most successful grizzly guides in British Columbia. Because of the slaughter I witnessed, I have done some study of the ecology of the grizzly. No man who kills one for sport or for any reason other than dire necessity can claim to be an ecologist. Their feeding habits, their cub-rearing activities, and their very size have made them "ursus the easy-to-hunt" not *ursus horribilis.*

It appears that Mr. Wright and his wife have at least monthly contact with the "outside world." He killed the bear because he is a hunter. No pretension should be made to ecology. The article might better have appeared in a sporting magazine. It is not ecology and it is not history.

Andrew Hendry, Davis, California

TO THE EDITOR:

Grizzlies are magnificent animals, and my own observations of these bears have produced reactions much like those expressed quite clearly by both Sam Wright in his article and by Andrew Hendry in his letter. Mr. Wright attempted to describe himself in two separate roles and to convey an experience and his associated feelings, a survival experience in a real sense even though it was real by choice rather than by uncontrollable circumstance.

The Wrights have followed the increasingly well-trodden trail to the bush of northern Alaska and have elected to live with minimum input from external society. I have not had an opportunity to meet them, but I know some of their "neighbors" well. Their cash income is probably low, partly if not entirely by choice. A principal goal is immersion in the country and its processes. None of my acquaintances has carried the ecological integration to a complete emulation of pre-white living patterns or technology.

However, even though some compromise is made with purity of approach, a deep and very moving emotional involvement results from firsthand experience in a situation where your own efforts will make an unequivocal difference in your very survival. The fact that people like the Wrights and others I know have placed themselves in such a situation voluntarily does not lessen the reality of the survival questions that face them through the year. The voluntary aspect raises other questions, but these deal with the morality of consuming wilderness and ethics of the society which was left behind, not the matter of food and warmth right here and now.

Accept the situation of a decision to live from the land. Brooks Range falls come quickly; and September is usually a month of steady frosts and a rapidly weakening sun. It is a month during which the country gets serious about the cold, dark, barrenness of winter. Thick ice and permanent snow may wait for the first part of October, but September is when Brooks Range residents are clearly faced with the need for successful hunts.

Huge herds of caribou live in the Range; the Range is hunger, and the flowing herds are likely to be ephemeral at best in many locations. Meat must be put aside as opportunity presents itself once the weather is right. Caribou tends to be lean, and winter cold seems to create an urge for fat. To many, bear meat would be a welcome supplement, though that of blacks is usually preferred.

Sam Wright fell into the role of hunter not in play as do most of the fall throng but as a true predator; at that moment he had to shed his intellectual ecology and expose a set of reactions some might call primitive—most of us haven't dusted them off very recently, if ever. Participation in ecological processes produced these reactions—ecology on a different level, and Wright identified the change in his story.

My personal set of values places subsistence hunting above that done for recreation, and at this point in time I do not

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This page, A MATTER OF OPINION, *is provided as an open forum. Contributions are invited, but should be limited to 750 words and must be signed.*

The Great Pursuit

REVIEWED BY FEROL EGAN

WHEN PANCHO VILLA and his men raided Columbus, New Mexico on March 9, 1916, they managed to force President Woodrow Wilson into a dirty, little war that had all the makings of a comic opera. But as in all wars, the presence of death left only a perverse humor that it is now possible to consider from the safety of historical distance.

The Great Pursuit by Herbert Molloy Mason, Jr. *(Random House, New York, 1970; 269 pp., illus., maps, appen., epilogue, $8.95).*

Herbert Mason's *The Great Pursuit* is a thoroughly fascinating study of General John "Black Jack" Pershing's Punitive Expedition into Mexico. Through a scholarly consideration of published and unpublished materials and through interviews with survivors of this strange war, Mason gathered the guts for a dramatic picture of the complex forces at work in this struggle.

On the U.S. side of the border confusion was a key factor. The State Department specialized in collecting all the wrong information and passing it on for executive consideration. On Mexico's side of the border, Venustiano Carranza and the Constitutionalists were involved in a revolution against the government and caught up in inter-party affairs.

Into this cauldron President Wilson sent an American Army to pursue Francisco "Pancho" Villa, but the naïve Mr. Wilson had no concept of what he was letting the troops do. If he had, he would have realized that any American Army would have been considered invaders by the Mexicans. He would have realized that any pursuit of Villa's men in the wilds of the Sierra Madre Occidental was doomed from the beginning. And, most of all, he would have realized that Pancho Villa was a folk-hero for Mexico's poor people.

With cavalry, infantry, and the earliest beginning of an air force, General Pershing crossed the border into the State of Chihuahua. Using all the regular tactics for a full scale conflict, he was frustrated from the start by Villa's strategy of hit-and-run. Time after time, the Americans thought they had Villa trapped. But after all the escape routes were closed, and they moved in for the capture or kill, the wily Villa was gone again. In addition, the Carranza force that was supposed to help the Americans was doing everything it could to halt its progress. This even included inflicting a considerable defeat upon them at Carrizal where Carrancista troops killed twelve Americans, wounded ten, and captured twenty-four.

But the defeat at Carrizal was only a final humiliation for Pershing's troops. Prior to that, they had marched almost to the State of Durango without finding Villa. At one point, General Pershing was so frustrated that he wrote to an old friend, "I feel just a little bit like a man looking for a needle in a haystack with an armed guard standing over the stack forbidding you to look in the hay. . . ."

Everything went wrong for Pershing. The First Aero Squadron, which was to serve as his eyes in this vast country, failed in a Mack Sennett fashion. When the planes weren't broken down, they were crashing into the ground. When they were in the air, they couldn't fly high enough to avoid the mountains, so it was only possible to use them for the delivery of messages in the flat stretches of northern Chihuahua. The problems of transport and supply were very nearly impossible as trucks and cars broke down, got stuck in the sand, or ceased to function in the desert heat of the Central Plateau. Finally, the infantry and cavalry could seldom catch up to any of Villa's men; and, to help the morale of these weary soldiers, Pershing even saw to it that a brothel was established for them at Colonia Dublán, the old Mormon settlement in northern Chihuahua.

After ten months of this wildest of goose chases, "Black Jack" Pershing and his army of 10,000 men left Mexico. They had not found Pancho Villa. They had been humiliated at Carrizal. And the only thing of value which came out of this exercise in futility was a field training for such young officers as George Patton and "Lightning Joe" Collins who were to go on to greater things in World Wars I and II.

And what about Villa? After the Americans departed, he lost a major battle to the Carrancista forces. Then he raided towns within Mexico for the next few years, and on June 14, 1919, ". . . he launched a night attack against Juarez." But between the troops of Carranza and the Americans stationed at El Paso, Villa was driven out. This was his ". . . last appearance on the Texas border." That same year, the fox of Chihuahua lay down his arms, but he had made too many enemies during his hectic life.

On July 20, 1923, Francisco Villa was machine-gunned to death at Parral in a carefully planned ambush. But, folk-heroes die hard in the memories of the old, and they are revived by the young in search of romantic heroes, so it is that *The Great Pursuit* adds another monument for the "butcher boy" from Chihuahua who remains an unofficial hero in his native land.

Ferol Egan *is an associate editor of* THE AMERICAN WEST.

XUM

The Life, Times and Treacherous Death of Jesse James

REVIEWED BY LAURA FOSTER

THIS BOOK is a period piece in the body of literature on America's most notorious outlaw, Jesse James. Written in the melodramatic style of the Victorian era, it is a reprint of a book published seven weeks after James's murder in 1882; James was shot in the back at the age of thirty-four by one of his henchmen while dusting pictures in the parlor of his own home. The murder and subsequent publishing of this book were surrounded with such sensationalism that, because of these twin events, the James legend was established forever in the public mind.

The Life, Times and Treacherous Death of Jesse James, reprint of 1882 edition by Frank Triplett, recently edited with introduction by Joseph Snell *(Swallow Press, Chicago, 1970; 344 pp., intro., illus., $15.00).*

Though less accurate historically than the other fifty or so books written about James, it is a positive contribution for several reasons. One is the uniqueness of its sources. James's wife and mother dictated much of the material, and the remainder came from newspaper accounts. Indeed, so much credit is given these women that Frank Triplett modestly claimed the title "compiler" rather than "author."

Another positive aspect of the book is its timeliness in relation to James's death. It captures the conflicting emotions of the day: the relief of a frightened citizenry on one hand and the sorrow of those who loved and admired James on the other. The timeliness aspect contains hidden dangers, however, as in the case of today's quickie biographies of national figures who have died recently. Triplett's sentimentalized tone and numerous omissions have originated and fostered many misconceptions about Jesse James which persist today. A more accurate title might have been, "The Making of an Outlaw, 1882."

A major misconception fostered in the book concerns the question of why James became an outlaw. Triplett explains that the James brothers turned to robbery because of their rejection by the citizens of northern Missouri after their Civil War careers as southern bushwackers. He ignores the fact that other reformed bushwackers resumed their places in Missouri society after the war. Furthermore, he does not explore the probability that James could have had adequate economic support from farming.

James's relationship to his three fathers is insufficiently examined as a clue to his antisocial career. The facts that James's first father died when the boy was four, his second father despised him, and his third father favored his brother Frank should have been told in relation to James's alienation and life of violent crime.

Also missing is a believable explanation of why Jesse enjoyed greater fame than Frank. The only reason Triplett gives is that Jesse was more daring in battle and fought like a "demon of destruction" while Frank was the cautious type. In actuality, Jesse probably suffered from an inferiority complex: he fought meaner, talked louder, hogged the limelight, and became one of the first major public images created by the American press. Another possibility for Jesse's fame may have been that he was "treacherously murdered" in the prime of manhood, while Frank lived to a serene old age. In Joseph Snell's view,

James's obituary—front page news.

a sensational death often catapults to fame an otherwise ignominious historical figure.

Editor Snell's introduction is invaluable for placing the book in historical perspective. He describes the book's colorful publishing history and warns of its reliability as a repository of truth. His clean editing of the original text captures the essence of an incredibly action-packed tale. The illustrations—thirty-four photographs and eighteen drawings and paintings—are an excellent addition, although there is unnecessary duplication of paintings.

In sum, this is a worthwhile and unique contribution to the Jesse James library. As the title page says, "Truth is more interesting than fiction." But the book must be read with caution and the understanding that truth is often laced with fiction.

Laura Foster *is on the editorial staff of* THE AMERICAN WEST.

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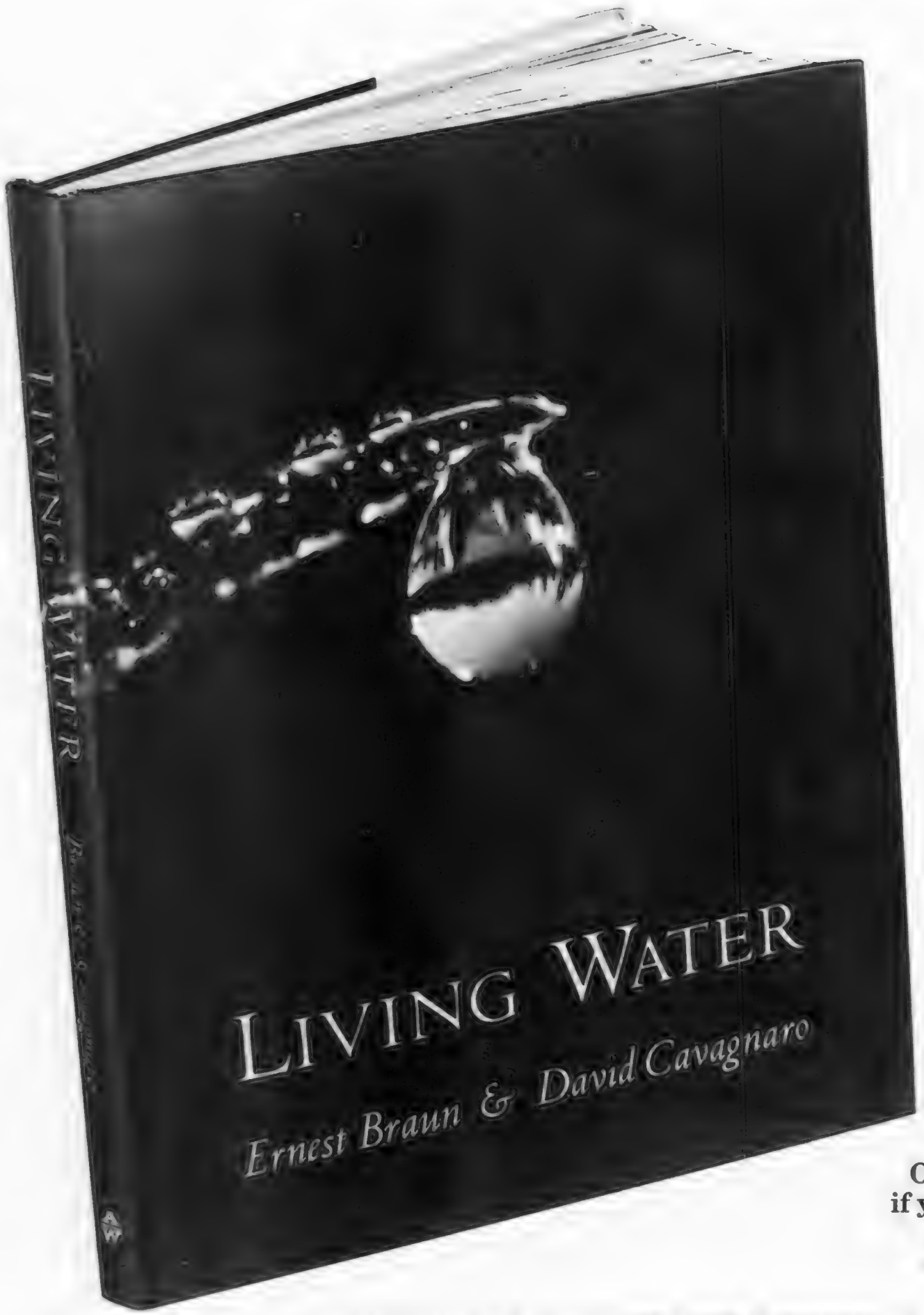

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David Cavagnaro *(left)*

David Cavagnaro majored in entomology and biological sciences at the University of California and San Francisco State College, and rounded out his education by taking field trips to India, Southeast Asia, Australia, Central America, and Mexico. In 1964 he spent five months in the Galapagos studying insects for the California Academy of Sciences. He is currently a teacher of the natural sciences.

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XUM

The Lost Trappers by David H. Coyner, edited with introduction by David J. Weber *(University of New Mexico Press, Albuquerque, 1970; 188 pp., illus., maps, notes, index, 1847 book reprint, $8.50).*

REVIEWED BY DALE MORGAN

IN UNASSUMING but attractive addition to the Western Americana shelf is this first modern edition of a book originally published in Cincinnati in 1847—a once familiarly mentioned but increasingly ignored member of the cast in the theater of Western adventure. Few students of the West have been able to afford any of the editions published between 1847 and 1892, and still fewer have been motivated to study it in the rare book libraries. Now an able young scholar has brought to Coyner's text a cool, scrupulously researched introduction and sagacious notes.

The Lost Trappers purports to be the story of Ezekiel Williams, a man who, as Mr. Weber says, "allegedly led twenty trappers up the Missouri River in 1807, the year after the return of the Lewis and Clark Expedition. Williams' party reputedly made their way to the Yellowstone and trapped the Rockies, working their way south. By the time Williams reached the Arkansas River, only two of his twenty companions were alive. . . . At the Arkansas, the three survivors separated: James Workman and Samuel Spencer started for Santa Fe, but became lost; they crossed the Rockies by a circuitous route and luckily met a Spanish caravan bound for California. And Ezekiel Williams placed a canoe in the Arkansas and set out alone for home, reaching the Missouri in 1809—or so the story of 'the lost trappers' goes."

Ezekiel Williams was in fact a participant in the Rocky Mountain fur trade between 1809 and 1815, and there are enough correspondences between the tale Coyner tells and the slender documentation on Williams' life for it to be supposed that Coyner actually talked to people who had known Williams, not long after the man died in 1844. Coyner would have had his readers understand that he drew information from "an old, musty, mutilated journal, kept by Captain Williams," a claim Mr. Weber effectively knocks down.

The editor has also brought out well Coyner's signal borrowings from Lewis and Clark, Irving's books, Pike, Frémont, and Lansford W. Hastings. In general, what we have here is fiction designed to be read as fact, a type of American literature in need of further investigation and classification, and Mr. Weber's notes are helpful guideposts along the way to such an inquiry.

The editor offers some fresh data on the author, David Holmes Coyner, which is also a welcome feature of this book. He did not inquire quite far enough, though, in attributing to Peter H. Burnett the "Way Bill to Oregon" Coyner included in an appendix, as there are essential differences between Burnett's data and that in Coyner. I assume that Coyner clipped his waybill from the contemporary newspapers; he derived it probably from the *Jefferson Inquirer,* April 15, 1846, a shortened version of a waybill printed in the Fayette *Missouri Democrat,* December 17, 1845.

Dale Morgan, *on the staff of the Bancroft Library, University of California, Berkeley, is a recognized authority on the fur trade.*

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Aspen: Dreams and Dilemmas—Love Letter to a Small Town by Peggy Clifford and John M. Smith *(Swallow Press, Inc., Chicago, 1970; 214 pp., $15.00).*

REVIEWED BY JOHN G. MACKIE

THIS FALL IN Aspen as the leaves turn gold, a sprinkling of bumper stickers read—"Think Snow" while others state boldly, "Save Aspen—Ski Vail." Here in the valley of the Roaring Fork, a small town like a freckle-faced girl has grown into a sparkling, vivacious young lady, with a world full of lovers. And this lady Aspen truly has a love affair with her devotees. It's "a passion," "like a religion"—"a real gut feeling" is the way some Aspenites express it.

In a wonderful volume of pictures, history, interviews, and reminiscence, authors Clifford and Smith seem to want to tell the world to keep their hands-off-our-girl, while inviting the people of the world to come and take a look. They see the condominiums, the automobiles, and the developers crowding out the charm and freedom that is Aspen, and they tell about it in such a delightful way that anyone would be a fool not to go out to Colorado and watch the show.

Much of the authors' premise is included in a paragraph from the first chapter. "Aspen, Colorado has lived in a state of siege for nearly a decade. One of the great small towns, one of the few to combine the sophistication and freedom of the city with the beauty and serenity of the country, it will not die, it is too remote to be absorbed, but it is under fire and it is changing." But they leave the reader hanging from the ski lift when it comes to solutions to the real problems of small-towns USA.

Aspenites, however, are fighting their own battle for their mountainous mistress. Since this book was published, the voters have adopted a sales tax to provide funds for buying open space and have bonded themselves to acquire a green belt into town. Resist and Reform candidates are on the ballot to save Aspen. Planning, density, and population limitations are displacing the mountains, weather, and skiing as conversation topics on Cooper Avenue and South Galena. The grand lady at the head of the Valley is mounting an army for defense.

John G. Mackie *of Carbondale, Colorado, is a lawyer with a special interest in the Rocky Mountains.*

Gifford Pinchot, Private and Public Forester by Harold T. Pinkett *(University of Illinois Press, Urbana, 1970; 167 pp., intro., illus., biblio., index, $6.95).*

REVIEWED BY H. BRETT MELENDY

IN THIS LATEST of several biographies concerned with various aspects of the life of Gifford Pinchot, Pinkett has chosen to deal primarily with Pinchot's career as a forester.

The author is the leading authority on the records of the U.S. Forest Service in the National Archives. Additionally, his general knowledge of related records and collections has led to this book's readable contribution about how forest management came into being in this country.

The book traces Pinchot's early education at Yale and then in Europe. Unexplained is the basic motivation that led Pinchot into a field of study that did not even exist in the United States. Perhaps, we, with the author, must accept the brief account of this event written by Pinchot himself. Two years after his return to the United States, Pinchot took charge of the Biltmore forests at the George W. Vanderbilt estate in North Carolina. He turned the area into a model forest, providing for constant yields and profitable timber production.

Pinchot, as a private forester and later as Chief Forester of the United States, was not a conservationist in the more recent meaning of that word but a manager of forests for the development of sustained yields over the decades. He sought eventually to preserve all natural resources for their long run utilization.

During his Biltmore career, Pinchot gained familiarity with timberlands in the eastern United States. In 1896, he was named to the National Forest Commission, and he soon emerged as the guiding light in the forestry movement. An assignment as special forest agent for the Department of Interior led him through the forest lands of the West. In 1905, President Roosevelt named Pinchot Chief Forester, and the U.S. Forest Service was launched.

The author is at his best as he carefully details the creation of the national forest service, showing Pinchot's organizational ability. He carefully examines correspondence and documents surrounding charges made against Pinchot that his role of publicist was being misused for personal enhancement and to lobby for

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the service. Pinkett suggests that publicity was a valuable activity for the forestry program. As manager of the national forests, Pinchot took an early lead in forest research—to improve forest lands and timber yields, to control forest fires and insects, and more importantly to find new forest products.

During his tenure under Roosevelt, Pinchot widened his horizons to consider the long term use of reclamation lands and inland waterways, culminating in the National Conservation Commission. The famous Ballinger-Pinchot controversy was an outgrowth of these interests.

Pinchot's years in the Progressive Movement and his other political activities after dismissal by Taft are left to the other biographers. Attention is focused next upon his concerns about the forests of Pennsylvania. His term as state forester soon led to the gubernatorial chair of that state.

After reading the book, one is moved to ask, "Will the real Gifford Pinchot please stand up?" It is difficult, if not impossible, to know what sort of a person Pinchot really was. Little is presented of him as a human being, with no assessment of his strengths and weaknesses of personality and character. It is obvious that he could be a successful pioneer because he was financially secure. It is clear that he was a dedicated zealot. Zealots usually have intense narrow interests that lead to conflicts, and Pinchot's life is full of conflict with people over the "right way." He was a disciple of Theodore Roosevelt; he, in turn, had his own band of dedicated followers.

The tasks undertaken by Pinchot and their great consequences are well presented, yet Pinchot as a person comes out as an unknown quantity. It would have been fascinating to know what his political and interpersonal relationships really were and how they operated in the dynamics of creating the Forest Service.

H. Brett Melendy *is vice president for community colleges at the University of Hawaii, Honolulu.*

We Talk, You Listen by Vine Deloria, Jr. *(Macmillan, New York, 1970; 227 pp., intro., appen., $5.95).*

REVIEWED BY JACK BURROWS

THE WITTY and articulate Sioux author of *Custer Died For Your Sins,* Vine Deloria, Jr., has produced a second book with an Indian-enough sounding title: *We Talk, You Listen.* But this confusing and exasperating book either establishes Deloria as an ardent disciple of Marshall McLuhan, replete with all McLuhan's trappings and jargon—media, communications, electronic culture, Woodstock culture, tribalism, symbols, and messages—or it is the put-on of the year, an incomprehensible McLuhanesque parody.

Either way—and one suspects it's the former—theories, arguments, and solutions dissipate bewilderingly into succeeding pages or are neatly truncated aborning. Those that survive are rarely original and often obtuse and simplistic. Worse, scholarship—sociological and historical—is so shoddy as to further make the book suspect. And it is a difficult and dangerous book to quote because the vagrant and random thoughts, the sudden shifts of emphasis, throw quotes out of context.

But in or out of context, quotes characterize the book. Racial prejudice notwithstanding, the real opposition to bussing school children reveals a growing tribalism among white Americans.

Housing also indicates a shift toward tribal and communal living: ". . . residential patterns are shifting away from an economic determinism. In New York City the trend is still running strong for cooperative housing, while in the rest of the nation condominiums are the fad. . . . The parallel to Indian tribalism is important."

It's as simple as that. Preoccupied with "Indianness" and apparently fascinated by the jargon and terminology of the "electronics age," Deloria settles —inexplicably—for undeveloped and unpursued definitions.

Anyone who would read this book surely understands that opposition to bussing is, in fact, opposition to the broader—even national—sense of community, or that one may live in a co-op or condominium and still remain part of "The Lonely Crowd," without a sense of community or without even knowing one's neighbor.

Deloria states that "American society has so functionalized itself that it is unable to function as a society." Nowhere here does overpopulation appear as the real villain, though of course it

has been held accountable for pollution. Presumably two hundred million Indians would not have polluted because, being Indians, they would have wisely —with insights that apparently exist only in the tribal structure—eschewed technology which in turn leads to functionalism. They would have found a way to live organically with the land. (Those middens outside cliff dwellings are repositories for layers of culture.)

Now comes the "message": "The contest of the future is between a return to the castle or the tipi." Having "functionalized" and polluted ourselves beyond repair, we have no other choice, though a healthy share of us may prefer the castle, comfortable with Charlemagne.

Luckily, though, we are spared that agonizing decision because "American society is unconsciously going Indian." Perhaps. But it's rather difficult to take seriously a book that reads like McLuhanesque effusions extemporized in a wigwam by the unpolluted shores of Gitche Gumee.

Jack Burrows *is a history instructor at San Jose City College, California.*

Indian Skin Paintings from the American Southwest by Gottfried Hotz *(University of Oklahoma Press, Norman, 1970; 248 pp., illus., maps, $9.95).*

REVIEWED BY BERNARD L. FONTANA

FOR REASONS no one has ever adequately explained, we have virtually no contemporary Spanish pictorial record of the previously Spanish-held part of what is now the United States.

The Spaniards built missions from Florida to California and painted on their walls, but where are the Spanish paintings, drawings, or sketches of these very churches? What did the Indians look like with whom Spaniards came into contact? What was the appearance of the terrain, of the plants and animals and mountains foreign to Spanish eyes?

We find a few illuminations on maps and a scattering of presidio plans, but hardly anything to match the achievement of Jacques Le Moyne, the French Huguenot, in Florida and the Englishman, John White, in Virginia.

This is one of the facts which makes the two enormous hide paintings (each about 4 feet 6 inches by 18 feet 10 inches) described in this book so important. Whether painted by Spaniards or by Hispanicized Indians is perhaps less significant than the fact that the paintings provide us with views of people and their material culture—including tepees—during the early part of the eighteenth century in a region otherwise singularly devoid of representational art.

Indian Skin Paintings from the American Southwest, the title of which is not to be taken literally inasmuch as the skins are those of buffalos rather than of Indians, is a translation of a slightly revised version of *Indianische Ledermalereien* written by the same author and first published in Berlin in 1960. It represents Hotz's attempt to explain in detail the two pictures, one of which depicts a battle between opposing forces of Indians and the other a fight between Frenchmen and Spaniards and their Indian allies.

Hotz believes the latter to be a commissioned painting representing the Spanish and Pueblo Indian expedition led by Pedro de Villasur to the Loup and Platte rivers in what is now Nebraska and its annihilation in 1720 at the hands of Pawnee and Oto Indians encouraged by the French. French soldiers actually appear in the painting, something they apparently fail to do in reliable documents, making Hotz suspect the propaganda of the hides.

Hotz offers innumerable explanations concerning the possible dates, artists, scenes, and people depicted, but as he says himself, "Such hypotheses are in the end merely conjectures." His discussion of the Indian vs. Indian scene, especially, is a study in equivocation. Given this fact it is too bad the plates in the book showing the paintings are not much better than they are, and in color. It would have given the rest of us a better basis upon which to do our own equivocating.

Even so, this ninety-fourth volume of Oklahoma's *Civilization of the American Indian Series* should serve historical archaeologists and related historians of clothing, utensils, ornament, firearms, horse furniture, and other such paraphernalia as a useful reference.

Bernard L. Fontana *is an ethnologist at Arizona State Museum, University of Arizona.*

THE AMERICAN WEST IN BOOKS

REQUIEM FOR A PEOPLE
The Rogue Indians and the Frontiersmen by STEPHEN DOW BECKHAM. This comprehensive account of the Indians of the Rogue Country in southwestern Oregon traces the origins and backgrounds of the three linguistic groups and tells the painful story of six bloody years of strife which virtually exterminated the people. Volume 108 in THE CIVILIZATION OF THE AMERICAN INDIAN SERIES*. Illustrated. $7.95. *March.*

TENTING ON THE PLAINS
By ELIZABETH BACON CUSTER. Introduction by JANE R. STEWART. Until her death at the age of ninety, Mrs. George Armstrong Custer devoted herself to defending her husband's reputation or adding a gloss to it. This is the story of the Custers' life. Numbers 46, 47, and 48 in THE WESTERN FRONTIER LIBRARY. Illustrated. Set: $8.85. *March.*

THE TAOS TRAPPERS
The Fur Trade in the Far Southwest, 1540-1846 by DAVID J. WEBER. Colorful French and American traders and trappers made remote Taos one of the most important markets for beaver in the West. In this first comprehensive history of the fur trade in the Far Southwest, the author surveys the activities of the trappers and their importance in the permanent settlement of that region. Illustrated. $8.95. *March.*

THE CHICKASAWS
By ARRELL M. GIBSON. For the Chickasaws, the absorption of their nation into the emerging state of Oklahoma in 1906 signaled the end of their existence as a semiautonomous Indian republic. This first book-length history of the Chickasaws recounts their 350-year struggle to preserve a measure of their tribal institutions and independence. Volume 109 in THE CIVILIZATION OF THE AMERICAN INDIAN SERIES*. Illustrated. $8.95. *April.*

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BOOKS IN BRIEF

By Jane M. Offers

Mother Lode Narratives by Jessie Benton Frémont, edited by Shirley Sargent *(Lewis Osborne, Ashland, Ore., 1970; 160 pp., illus., maps, notes, index, $13.50).*

In a remarkable little volume Miss Sargent has presented the essence of the Frémont family's experience in the southern Mother Lode. Gathered together and skillfully combined are selections from Mrs. Frémont's *Far West Sketches* plus personal letters never before published. Add to this first-rate printing, good illustrations, and fine maps. The result is a choice item for collectors of Californiana.

The Sign of the Eagle: A View of Mexico, 1830 to 1855 foreword by Richard F. Pourade *(Union-Tribune Publishing Co., San Diego, 1970; 170 pp., illus., maps, notes, index, $14.50).*

The Mexican War was an adventure in Manifest Destiny. Hardly a popular war either at home or in the field, it did provide adventure for the *gringo* soldiers. The letters of Lt. John James Peck are a rare combination of tourism, militarism, and homesickness. This blend, along with excellent color illustrations, make the book a rare experience for Mexican War buffs. In addition, it helps to shed more light on a dark alley in United States–Latin American affairs.

Tales from the Mohaves by Herman Grey, foreword by Alice Marriott *(University of Oklahoma Press, Norman, 1970; 96 pp., intro., map, biblio., $4.95).*

The myth was central to Mohave culture as an expression of traditional values and basic beliefs. This collection of myths, compiled by a Mohave, illustrates the tribe's relationship to nature and the incessant raiding that was an integral part of their lives. It affords a rare opportunity to glimpse the psychological core of one group of red men.

Journal of a Cruise of the United States Schooner Dolphin by Lt. Hiram Paulding, U.S. Navy, introduction by A. Grove Day *(University of Hawaii Press, Honolulu, 1970; 258 pp., $6.00).*

Several themes of Pacific history are tied together in this reprint of an 1831 journal. Whaling, shipboard mutiny, the beginnings of the U.S. as a Pacific power, early contacts with South Sea peoples, and missionary difficulties in the Hawaiian Islands are all described in these pages. The journal is a valuable addition to the annals of oceanic exploration.

Delightful Journey by Barry M. Goldwater *(Arizona Historical Foundation, Tempe, 1970; 209 pp., illus., intro., supplemental essays by Robert C. Euler and Carleton B. Moore, $15.00).*

In 1940, Barry Goldwater fulfilled a lifelong ambition to duplicate the river voyage of Maj. John Wesley Powell, first white man to explore the Green and Colorado rivers in 1869. This book is an expansion of several articles and a small volume produced shortly after the group's 1,463-mile trip. It exposes the thrills and fears of "river rats" who rode the rapids before they were dammed and controlled.

General Pope and the U.S. Indian Policy by Richard N. Ellis *(University of New Mexico Press, Albuquerque, 1970; 287 pp., biblio., notes, index, $10.00).*

One of the more significant American frontier experiences has proved to be federal-Indian relationships. This book focuses on the experience from the point of view of Gen. John Pope, U.S. military commander in the West from the time of the Civil War to 1886. The study is based largely on Pope's official correspondence and concludes that he was a humane administrator concerned for the Indian's welfare.

WESTERN PHENOMENON

(Continued from page 47)

since been conducted in many agricultural experiment stations in the West for several species of plants.

Since it takes nature much too long to repair what man's whims can tear asunder in a short time, investigators at the early station in the Great Basin bore down on artificial revegetation for the sake of immediate control of runoff. Methods of seeding, as well as studies of adaptable species of shrubs, grasses, and forbs, were of early concern. Cuttings of aspen, willow, and mountain alder were among the first shrubs to be artificially rooted and planted on eroded sites for investigative purposes.

After Sampson's departure in the 1920s, the name of the Utah Experiment Station was changed to the Great Basin Branch, Intermountain Forest and Range Experiment Station. This was partly to avoid confusion with the research activities of the state of Utah, but it was also in line with new organization, new relevancies, and the geographic expansion of forest research. A regional research headquarters was established in Ogden, Utah, which henceforth became the administrative and intellectual nerve center for forest and range research in Utah, Nevada, Idaho, and parts of Montana, Wyoming, and Washington. Today, as the Great Basin Experimental Range, the pioneer station at Ephraim is only one of a dozen or so established stations in the Intermountain Region alone of the Forest Service.

The first of them all, at Ephraim, Utah, is still in business, and today it is conducting investigations in shrub genetics and problems of the rehabilitation of the winter range of the Rocky Mountain muledeer. These projects are being conducted in cooperation with research personnel at Brigham Young University, Utah State University (formerly the Utah State Agricultural College), and the Utah State Fish and Game Division.

If the old song has ended, the melody lingers on, and a certain amount of nostalgia has set in for those nostalgically inclined. On the oldest station plots and enclosures today one can still stumble over an old stake, marked with a number and species identification tag beside a forgotten or dead plant. Living memorabilia of the days of Dr. Sampson in the form of living ponderosa pines do little more than linger just outside the enclosure called Wiregrass. They are taller, but they have not spread beyond their original site—still a biological mystery of the western slope of the Wasatch Plateau. A patch of aspen just below the road near the Snowberry substation enclosure is called Sampson's Featherbed. Dr. Sampson himself died early in 1967 in Berkeley, but it should not surprise anyone to detect a little annoyed rustling among the quaking aspen in Ephraim Canyon whenever somebody in the valley is heard to remark, "They oughtta pave the top of the mountain, so's we kin git more water."

Albert Antrei *is a resident of Manti, Utah, and former technician on range and wildlife surveys and soil conservation projects in Oregon, Idaho, Nevada, and Utah. He has written many articles on western history, natural history, and general wildlife subjects.*

JEKYLL AND HYDE

(Continued from page 33)

Once in a while, Banks inserted news of the outside world in his journals, such as observations on the Boer War.

But the volumes are largely concerned with the humdrum life of a bookkeeper for the Donald and Edenborough store and with the state of his health. Something of a hypochondriac, although, at 143 pounds, he was within a pound or so of his weight in San Francisco many years earlier, Banks was terrified of the idea of being caught in the open by rainstorms. Actually, his health *was* declining by the turn of the century. His once fine writing hand had deteriorated into a scrawl by 1900; by 1903 his increasing blindness made his notes difficult to read at all.

Banks complained in his diaries of falling asleep at his work and of usually being tired in the evenings. Small wonder; although he turned in around 9:00 P.M., he almost always arose by 5:00 A.M. Still, his existence was placid for one of the most wanted men on Wells, Fargo's docket. He drank his gin and brandy in moderation and a native woman, either his wife or housekeeper, took good care of him. Banks was as concerned over his spiritual condition as he was of his physical health and became a regular churchgoer during his exile. Although there were no resident missionaries in Avarua in 1890–92 and 1902–15, there were several native pastors. The onetime hedonist and sybarite took to saying his prayers each night, too, before retiring.

Banks's recreations were pitifully few. He would sometimes shine his boots and whiten his solar topee and visit friends to play billiards. He liked to take buggy rides. The onetime "swinger" of San Francisco, who had owned one of the few unexpurgated editions of Richard Burton's *Arabian Nights,* now preferred Rudyard Kipling. Most of all, Banks enjoyed cycling. He would ride his bicycle all over Rarotonga for recreation, and he commuted to work on his "wheel."

He lived on the site of the present-day Cool Store in Avarua and worked at Donald and Edenborough's, which stood on the site of today's A. B. Donald's store a mile west of the harbor. So dull was Banks's life-style that local writer W. H. Percival found him too colorless a subject to write about as an emigré from the American West until he learned the details of his checkered past.

Early in his exile, Banks was the subject of a myth that he was a sort of down-and-out beachcomber, punished by fate for his transgressions. This was incorrect, but since San Francisco and the West could never accept the true situation of the outlaw—a dull, nose to the grindstone, churchy existence of Victorian conformity, for the large part—a new legend, even more erroneous, was created. He came to be seen as a kind of Bully Hayes, or "King of the Cannibal Islands!" Although he was largely forgotten on the mainland, San Francisco and the Pacific Coast came to recall a mythical Charley Banks right out of Pierre Loti or Louis Becke. On Saturday, July 31, 1897, for example, the Portland *Evening Telegram* ran a feature story on him which even managed to give him the wrong Christian name of Frederick. According to the *Oregonian,* he was now

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richer than the company he had robbed. How Hume must have guffawed to read that Banks, prior to his temptation, had been "an exemplary businessman, without a vice . . . [who] worked faithfully and never dissipated." To make a good story better, the reporter had Banks buying a yacht—"not an expensive affair, just a nice little schooner, roomy and comfortable"—to flee from a wharf at the foot of San Francisco's Mission Street to the Hervey Islands.

When Hume sent detectives to Rarotonga, they were met not by a cyclist with fading eyesight on his way to services but by a Bully Hayes reincarnate, backed up by five thousand natives. Luckily for us, the inventive journalist was able to quote Chief Banks's very words: "Over this roof is the flag of this country. It is my flag and my country. We do not know the United States; we have relations with nobody and nothing on earth. You may tell the Wells, Fargo Company to go to hell!"

The writer ended his romantic picture of the one Wells, Fargo embezzler who really evaded Jim Hume's grasp with a flourish. Eric Francis, if he read the story, would not have recognized his old friend who, he knew, was eking out a living from bookkeeping and the inexplicable receipt of fifty Peruvian dollars sent him regularly by a German bank robber. (Perhaps an old accomplice?) Summed up the newspaperman: "Today he is King of Rarotonga, wealthier than the Wells, Fargo Company, beloved by the numerous and amiable people and recognized as a sovereign by the United States Government[!].

"Should you visit Rarotonga, the Tonga will entertain you. He is always glad to see Americans. You will be fed like a king and you will drink as good champagne as you drank at home. Good ships bring the world's sweet things to the King who wears a 'pario' (i.e., *pareu*) and bares his legs to the sun. His Hoola-Hoola girls sway in their graceful dances and croon their soft songs for him. He sits in the shade of his own tree and is fanned to comfort and sleep by his own household."

BIBLIOGRAPHIC NOTE

At first the denouement of the story of Wells, Fargo's embezzler extraordinaire seemed as impossible to record as the last days of Black Bart, who vanished into an oblivion, which has remained impenetrable to this day. A perusal of Eric Francis's typescript *Reminiscences* and diligent digging in the letters, telegrams, clippings et al. of the James B. Hume archive, all in Mrs. Irene Simpson Neasham's History Room of the Wells, Fargo Bank, San Francisco, flushed out the skeleton of the story of Banks, which became a part of my biography of Hume, *Wells, Fargo Detective* as well as a chapter in the book by the London Westerner, Colin Ricards, titled *Bowler Hats and Stetsons.*

Since publication of my book, however, I find that my correspondence with Cook Islanders has opened up a bio-historical lode on Charles W. Banks in the South Pacific. This article owes much to the help of W. H. Percival and I. W. Boulton (Information Officer, Government of the Cook Islands) in Rarotonga, and Archivist (Mrs.) Lynnden Pogson of the National Archives of New Zealand. I am very grateful to them and hopeful that Banks's diaries will be copied and made available to researchers of western American history.

Richard H. Dillon, *a native Californian, is head of the Sutro Library in San Francisco. His books include:* Embarcadero; The Gila Trail; The Hatchet Men; *and* Wells, Fargo Detective.

A MATTER OF OPINION

(Continued from page 48)

begrudge an occasional Brooks Range grizzly to a true subsistence hunter, even though from the comfort of civilization I like to think other meat could be obtained. The valleys of those mountains are not replete; if we permit subsistence living there, we must accept an opportunistic approach to food gathering.

Now to some of the more specific questions. The bear in the photographs on pages 32 and 35 of the November issue appears rather young to me; I would venture a guess at three to five years, an animal in the relatively early stages of its independent life. It does not seem to match ". . . a prize bear," ". . . hundred-pound ham," etc. However, this does not bother me too much. If I were seriously hunting bear for food I probably would not concern myself with pictures of the specific quarry.

In addition, pictures of bears can be deceptive regarding size and weight. I suspect Mr. Wright used author's license and supplemented his account with bear pictures that he did have; it is even possible that he did not write the captions and did not intend to imply that the animal in all of the photos was the same individual.

If he did make use of photos not directly connected with the recounted experience, Mr. Hendry's comment regarding the apparent season may well be answered. Pictures from many seasons appear in the article. Even if the bear was the one Wright shot and was photographed on the day of the hunt, the green of the shrubs need not indicate warm weather as Mr. Hendry implies. By the time the balsam poplars have lost their leaves, meat will keep in the Brooks Range, especially if it is in the shade or better in a cold cellar. It may not be hard frozen and in ideal storage conditions, but it will be edible. September meat would stay frozen many years in that country.

Mr. Hendry pressed the point about the monthly contact with the Outside; this is minor in view of the Wrights' philosophical position, but for several years it has been difficult if not impossible to get a float plane out of their nearest source of aircraft support. Consequently, I suspect Wright may have meant but did not clearly state that when the ice became thick enough in October, monthly landings could resume.

I do not wish to tear Mr. Hendry's comments apart. They were made sincerely, and much of the issue is entangled in philosophy and value judgments. Who is to say just what the bounds of Rightness are? I believe that Hendry, Wright, and I would all react in much the same way to a grizzly in the wild.

The most critical question Hendry bypassed. Do we have enough wilderness to permit anyone who might want to live Wright-style to do so? I doubt it, and yet our society needs an infusion of the philosophy and emotional experience of the sort these people are working out. Sam Wright has attempted to fulfill what I feel is an obligation shouldered by those privileged to live in his situation. Many must come to understand wildness vicariously.

The fact that his article falls short of really rising above the usual hunting tale is undeniable. He is trying to deal in human ecology and hopefully will be able to make the readers of his future writing come closer to a firsthand encounter with a very real environment and way of life.

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THE WEST'S GUNMEN: II

(Continued from page 23)

Bill Hickok provided a balanced account of that legend, and his book on the gunfighter, while not exhaustive or particularly innovative, treats the subject with understanding. William A. Settle, Jr., wrote a legitimate biography of Jesse James. Robert R. Dykstra's *The Cattle Towns*, while not dealing directly with the gunman, is important as a tool for understanding the cowtowns and because of its suggestions concerning cowtown violence.

Unfortunately, such works are scarce, and the sum of historical writing on the gunman is poor. The same tragic flaw that Gene Rhodes detected in the work of Walter Noble Burns, that "admixture of credible evidence with rumor, surmise, opinion, innuendo, and maudlin sentimentality," still stands as a valid indictment of writing in the field.

The poverty of historical writing in this area is apparent, but it is not necessary to reject it as a "grade school Grand Guignol," as some have. If the literature on the gunfighter is "compost," it is not because the gunman is inherently unfit for serious history. Indeed, the myth that has so devastated the historical gunman suggests his importance. "Of all the figures of the American frontier, the bad man with a single-action Colt's revolver in his hand has the surest claim upon the attention of American readers," Ramon F. Adams writes. "Without him, the more or less orderly process of settlement would have been as dull as neighborhood gossip in a country store. With him, the West was in ferment from the moment of its social emergence."

The mythical gunfighter has become a dimension of the historical problem. What people believe to be true is often as important as reality. It may, in fact, be a part of the truth. Hence, while Colonel George Ward Nichols's account of the exploits of Wild Bill Hickok is false, and the dime novels of Ned Buntline are pure fantasy, those early writings certainly had an impact on those who came into contact with the real James Butler Hickok. The myth must be understood and appreciated—not for its gross distortions of history but as a reflection of American aspirations, ideals, and traditions. Already substantial work has been done in understanding the legend-making process. What remains is to separate the legend from history.

Extricating the gunman from the myth involves more than a continuation of a useless attack on previous writers. The same skepticism that produced debunking can be the basis for more serious historical inquiry. "Setting the record straight" is a vital part of historical writing, controversy lends it interest, and critical review of the literature is imperative. But the emphasis must be on the development of a mature, historically sound interpretation.

In order to accomplish this, the student of the gunfighter must be first a student of history in a broader sense. Any person who writes about the past needs the larger view afforded by a general knowledge of man's experience. J. Frank Dobie put it this way to an inquisitive sophomore with ambitions as a western writer: "Reading Carlyle's *History of the French Revolution* and Macaulay's *History of England* would do you more good as an interpreter of the West than reading anybody who has written about the West. Most people who write about the West have county minds. What they should have is a continental mind."

Dobie did not mean to imply that every writer must have some overarching hypothesis, some general interpretation of great significance in all that he writes. The significance of what C. L. Sonnichsen calls "grassroots history" is evident. The gunfighter is, after all, basically a regional figure. He is most involved with local institutions and history. Yet, in order to place those local institutions within the proper context, in order to identify the gunfighter, in order to understand properly the workings of local government in the areas where he operated, the writer needs a broader view. He may never mention a general interpretation. He does not have to. But the knowledge of history lends a maturity to his writing he would not have otherwise.

Perspective is needed for the historian to understand the social, economic, and political framework of the general era in which his subject operated or occurred. The heyday of the gunfighter came between the end of the Civil War and 1900 and, at the very least, the student of the gunfighter should be well grounded in the history of Reconstruction and the Gilded Age. Only in this perspective can the western historian understand the local institutions and customs that are his stock in trade.

Texas gunmen like John Wesley Hardin, Bill Longley, and Ben Thompson may profit from a view of Reconstruction, which takes into account recent scholarship in that area. Likewise, the Earp-Clanton troubles and attendant political climate need the perspective of party politics in the Gilded Age at other levels of government. Already, the Lincoln County War has been examined as more than a range war, and the Kansas cattle towns have been studied in the light of matters that have nothing to do with cattle or gunmen. With attention to such problems as these, the gunfighter may yet escape the narrow localism and juvenile melodrama which has traditionally plagued this field of western history.

In the process, historians may discover that the gunfighter in the familiar, classic sense—the gunfighter that has survived both hero-worship and debunking—never existed at all as a historical entity. That hypothesis would necessitate a complete reorientation of approach to the Earps, Hickoks, Garretts, and Billy the Kids of the western past. But even if the search for identity demands such a conclusion, the chroniclers of the gunfighter are likely to find some greater meaning for him, a more substantial role in the frontier experience.

"Environment made him," Eugene Cunningham observed thirty-odd years ago. An examination of that environment may well offer the key to understanding him as a genus and as a man. His era was the age of exploitation. *Laissez faire*—let alone—was the prevailing attitude in business, in government, in human relations. "Root hog or die," was the motto. It was also a turbulent era, perhaps the most violent one in American history, in which the Indians were subjugated, blacks were abandoned to Jim Crow, and labor disputes rumbled with strikes and riots. The lack of an effective social conscience was apparent and justified by one of man's most damnable heresies, Social Darwinism.

The disillusionment of the Civil War and the rise of materialism are partly to blame for these developments. The war

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produced a high toleration for violence and lessened the value of human life. This attitude was reflected in the East in labor violence and a lack of concern for the plight of the poor. It was apparent on the frontier in the Indian wars. Moreover, the rhetoric of the war, with its praise for physical courage and boldness, romanticized violence and produced a high respect for those virtues even among criminals.

Industrialization is another aspect. An increased migration to the West and the growth of railroads spread the economic and outward signs of civilization more rapidly than law and order and social restraint. In areas lacking sufficient authority structure (most notably the boom level of the railhead towns, cowtowns, and mining camps), semi-respectable or extra-legal professions were tolerated for economic reasons until more stable community life was established.

These factors are as important to understanding the milieu of the gunfighter as other, more familiar generalizations. Within this context the gunman emerges as a curious social phenomenon of the *urban frontier*. It was Adams who pointed out that, unlike comparable figures on other frontiers, he was not suited to "self-reliant isolation." He was the product of settlement.

But what combination of these factors produced him? What accounts for his peculiar brand of social deviance? The exploration of such questions might well provide insights not only about the gunfighter himself but also into unresolved questions concerning the frontier. Students of Frederick Jackson Turner have worried over the apparent paradox between his hypothesis that the frontier had a democratizing effect and the fact of violence on the frontier. But is it a paradox? Could it be argued that the absence of restraint—the very situation which permitted a wide latitude of individual freedom—increased the potential for violence? If so, could such a hypothesis be applied to other areas of American violence?

Recent studies on the theme of violence in American history emphasize the connection between the frontier heritage and American violence. Yet no substantial study of the gunfighter in this connection has been made. These questions and others offer an opportunity to look at the gunman beyond his individual exploits to the factors that produced him and the effects he had, in turn, on the society in which he lived.

The gunfighter will always be a favorite figure of American folklore and popular entertainment. The historian must accept that and realize that his problem is different. In the mass of writing about the gunfighter, what appears most lacking is a clear understanding of the historical process, the rules by which good history is written. The problem is one of a historiographical nature, part and parcel of the ancient questions asked by Herodotus, Tacitus, Gibbon, and Turner. Yet, somehow, the questions which plagued those men seem alien to the tales of Tombstone and Abilene. Perhaps this is why they are tales and the gunman is still Clio's bastard.

Gary L. Roberts, *professor of history at Abraham Baldwin Agricultural College, Tifton, Georgia, has written numerous articles on the trans-Mississippi West.*

MEDICINE WHEEL

(Continued from page 17)

center mound was a solid pile of heavy blocks, the rim mounds, though in disarray, had been hollow in the middle, as if they might have held up long-vanished posts.

What interested me most was that on top of the central mound rested a badly decayed buffalo skull, its curved horns almost weathered away. The staring eye sockets faced east toward the sunrise.

The numbers of those spokes and stones, the piled rocks of the hub, and the hollow round piles of the five rim mounds, plus the due-east orientation of the buffalo skull, seemed to ring a faint bell of comprehension that here lay a possible calendar wheel of a vanished race of red men, an American Stonehenge without the gigantic sarsen boulders or trilithons, which distinguish the 3,800-year-old lunar calculator on the English Plains of Salisbury.

In July, 1931, with a Boy Scout pack on my back I got on my thumb—the way I had come back to Wyoming—and hitchhiked the thirty miles of gravel road from Lovell to the old Five Springs campground and sawmill, where the road switchbacked across Five Springs Creek.

Bald Mountain City was much the same as a decade earlier, only a little more dilapidated and tumbledown. There, about three airline miles east of the Medicine Wheel at an elevation of 9,000 feet, I bedded down in a decaying cabin for two weeks of solitary exploration of the area, with visits to a recently established Forest Service ranger station a mile west of the log remnants of a gold ore stamp mill.

But the Medicine Wheel startled me, for there was a three-foot-high rock wall built entirely around the wheel, geometrically laid out as a square enclosing the circle. I climbed onto one corner of the wall with the sun at my back and clicked my folding camera, aiming northwest across the wheel toward the headwater declivities of Devil's Canyon. The central mound was almost the same, but the buffalo skull of ten years ago was gone. "A visitor got away with it," the ranger later told me.

The rock wall, the ranger also explained, had been erected a year or so before as a protection against wandering sheep, deer, elk, and bears, but already there was evidence that man had begun to tear at the wheel itself.

Nevertheless, when I counted the spokes and the stones making up their somewhat irregular lines, I found the numbers agreed with my memory. Moreover, the stones were still mostly the same crystalline quartz rocks that had always been there, except here and there a blocky limestone chunk marked a missing stone, inserted by the rangers who had built the wall from the limestones surrounding the shrine. Also, they had reconstructed the five rim rock piles as nicely hollowed shells, whereas I remembered the rocks lying in disarray, kicked over by wandering animals. Nice of the rangers, I thought a bit dubiously, to leave the wheel so neatly laid out.

This time, I found no arrowheads or other artifacts, no matter how I searched the whole crest of the short, wind-swept plateau. At the lip of the rim I stared out over the hazy vastness of the Big Horn Basin, noting the yellow twist of dirt roadway where it entered Five Springs Canyon. Beyond, across undulations of gray sage I made out the long, low dome of Sheep Mountain—one of

the nation's geological oddities—and the steep, sharp breaks where I had found Jurassic cephalopods and belemnites one hot Sunday afternoon half my lifetime back.

And then I left, looking back only once toward the walls of the wheel; it was evident that this strange Stonehenge-like monument would not be inviolate from human vandalism for long.

The year is 1955. Thirty-four years have passed since my first visit to the Medicine Wheel—a whole long generation—and many changes have occurred. Development of four-wheel-drive jeeps during World War II had opened America's great wilderness areas as nothing before had done; no sanctuary, however remote unless forever set aside from wheeled vehicles in a federally established Wilderness Area, was safe from hordes of people. Many of those slamming their machines against the limestone steps of the northern Big Horns came in search of uranium. What they took with them were the white quartz stones of the now vulnerable wheel.

In the interim years the Forest Service had bulldozed out a one-way, narrow track of a road from Bald Mountain City, a fearsome route to city dwellers with few turnouts and long, rough, low-gear grades. This is the only route over which visitors may drive today, climbing by hair-raising slants with precipitous dropoffs only inches from the outside wheels, crisscrossing the direct line I had taken on foot nearly a quarter century before. The rock wall of 1931 was entirely gone, and so were the quartz stones of the original wheel. In their places, as carefully and meticulously as could be done, the Forest Service had reconstructed the entire wheel—rim, spokes, central mound, and rim piles—all out of the angular limestone blocks they had used twenty-five years earlier to build the protecting wall. Only now, the numbers of stones varied widely from my original count of about twenty in each spoke and the same number, more or less, between spoke terminals at the peripheral rim. Moreover, the number of spokes had become almost indeterminable, for limy rocks scattered by visitors made it difficult to determine false spokes from true. Nevertheless, at least eighteen true spokes are evident in a careful examination of the photograph. The total number of stones in and about the Medicine Wheel was much reduced. Only here and there was a heavier rock still in place, perhaps too large, too heavy, or too ungainly to be carted away for whatever use vandals conceive—garden rock, perhaps, in some faraway city backyard.

Around the reconstructed Medicine Wheel the Forest Service had built an almost impenetrable enclosure of heavy posts six feet high strung with taut barbed wire at six-inch intervals, truly a formidable barrier to casual entry by unthinking curio-seeking visitors.

As I climbed to the top of the fencing to take a photograph, a profound feeling of sadness gripped my mind. This ancient monument, this Stonehenge of a vanished people, this seeming protocalendrical shrine of a pre-Aztec Indian tribe was only one man's childhood memory and no longer a translatable reality. The millennia-old shrine had vanished forever into the rock gardens, mineral collections, and garbage pits of solid American citizens from Maine to California.

I had a strange feeling then, as I do now, that were it not for the photographs which my father took fifty years ago and I duplicated a decade later, capturing perhaps a tiny bit of the ancient spirit of the wheel's astronomer-priests, all knowledge of what the Medicine Wheel may have represented would have been lost.

Who were those vanished red men?

As my wife and I descended the jolting hairpin grades, it occurred to me that the builders of the prehistoric wheel had to be Uto-Aztecans from whom, in the passage of millennia, emerged the Tenocha—or Aztecs—of Mexico. The last of more than twenty thousand years of Amerind migrations that filled the American continents with Asiatics was the great hegira of the Aztecs out of the "far northwest" into the great valley of Anahuac.

They spoke Nahuatl, one of the eight closely related families of the Uto-Aztecan linguistic stock, most closely allied to the tongue of the modern Shoshoni—the very people of the Great Basin states surrounding both the Big Horn Medicine Wheel and a second such shrine hidden in the fastnesses of Wyoming's Wind River Range some 200 miles to the southwest.

Indeed, I was thinking that the study of anthropology had revealed a remarkable similarity between the extremely primitive culture of the Great Basin Shoshoni and the highly complex, sophisticated culture of the Meso-American Aztecs. And hadn't the Aztecs been at the same Shoshonean cultural level when they emerged out of the Mexican plateaus to contest the valley of Mexico with the Toltecs in A.D. 1168?

And what the Aztecs brought with them when they reached their final homeland to build their capital city Tenochtitlan, now Mexico City, two centuries before the Spanish Conquest was an all-encompassing concept of time, of mathematics and astronomy, and the cyclic interrelationships between the eternal flow of day and night, the seasons, and the years. Somewhere along the route of their long migration described in their written ideographic histories they had developed a calendrical system that was at least a thousand years old by the time they reached Anahuac, the lake-filled plain where they were to dedicate their first temple in the year 4-Coatl (A.D. 1325). They came not more than a thousand strong, a "have-not" tribe from the Great Basin 2,000 miles northwest.

What the Forest Service did in attempting to reconstruct the Big Horn shrine was to restore only the outward symmetry of the original wheel; what became irrevocably lost in the process was the prehistoric mathematics that appears faintly in the early photographs: the eighteen spokes of twenty stones each—the eighteen months of twenty days each in the Aztec calendar; the 360 stones making up the rim of the wheel—the 360 days of the Aztec lunar year; the five hollow mounds equally spaced around the rim—the five *nemontemi*, or "empty days," which rounded out a complete solar year and which possessed neither names nor numbers because there was no place in the Aztec numerical system for them. The incredibly complex and mathematically accurate calendar stone, now in the National Museum of Mexico, was carved between A.D. 1479 and 1481, twelve feet in diameter and weighing twenty-four tons. With the sun in the center of the huge wheel, as mathematically complex as it is—a truly grandiose conception of the universe representative of the total history of the Aztec world—one can sense that its primitive beginnings might have been the Great Basin Medicine Wheels of Wyoming, just as the incredibly complex civilization they evolved in the space of two

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centuries had its roots in the abyssal ignorance and poverty of the "Digger Indians" inhabiting the mountain West.

The Shoshoni who still live in scattered tribes throughout the Great Basin area have seemingly lost all memory of the wheel's construction or meaning. Perhaps the particular Uto-Aztecan tribe, imbued with a genius for mathematics and astronomy and a millennium-long wanderlust, who became the Aztecs was the only tribe of all the Great Basin Uto-Aztecans to guide their destinies on the basis of calendrical prophesies. The estimated age of the Aztec calendrical system would suggest today that the Medicine Wheel may have been originally constructed 1,800 to 2,000 years ago—about the time of Christ.

The anthropologist Peter Farb considers that the Uto-Aztecans have inhabited the Great Basin for at least a hundred centuries—ten thousand years—and that the Uto-Aztecan language was a "mother tongue" as long ago as five thousand years. Thus the evidence suggests that the Big Horn Medicine Wheel and its duplicate in the Wind River Range are of Uto-Aztecan origin. The two wheels may mark not only the source of the Aztec migrations but also the genius that was eventually to make them the most powerful aboriginal nation in North America. Of all the remaining Uto-Aztecan tribes that inhabited the Great Basin region—Utes, Paiutes, Shoshoni, Bannock, and Comanche—only the last named has shown any signs of the migratory instinct. The Comanches emigrated from Wyoming to central and southern Texas about A.D. 1700.

And there the mystery rests today. Neither of the two Medicine Wheels have been officially dated by radiocarbon techniques if, indeed, any residual carbon could be excavated from beneath their central sun-mounds. It is probable that the Big Horn Wheel is older than that in the Wind River Range, perhaps by several generations as the Uto-Aztecans moved slowly southward. After all, Stonehenge in England was built about eighty years after Carnac in Brittany, when the Carnac tribesmen had succeeded in migrating across the English Channel to settle the Plains of Salisbury some 3,800 years ago. But there any similarity between the two astronomical instruments ends, except for their congruent mathematics.

Three thousand years of vandalism have removed much of the Stonehenge evidence but could not affect the gigantic sarsens and trilothons. This enabled twentieth-century scientists to reconstruct the astronomical characteristics that made Carnac and Stonehenge primitive computers for the fifty-six-year lunar eclipse cycle. But it took less than forty years of witless curio collecting from the Big Horn Medicine Wheel to destroy forever its mathematical implications. Let us hope that the Wind River Wheel, seldom visited by even the most redoubtable wilderness savant, escapes this fate.

Jay Ellis Ransom, *anthropologist and freelance writer-photographer, has published extensively in magazines and journals in the field of geology and anthropology, in addition to authoring books which include:* A Complete Field Guide to American Wildlife, *western ed.(1969).*

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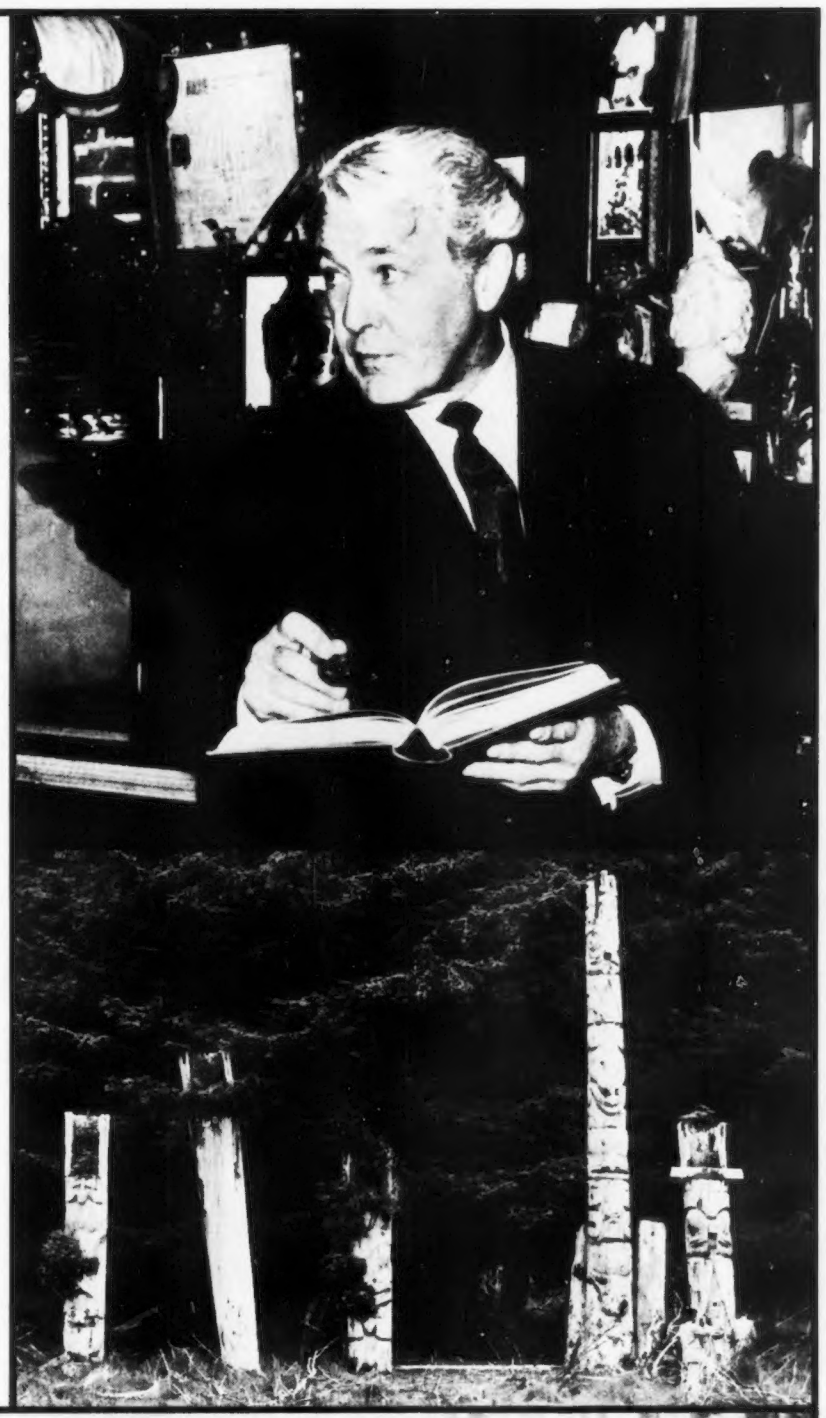

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